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"Square Deal" Developments

ANOTHER important stage in the negotiations by the railway companies of their claim for a "square deal" was reached on March 7 when they were able to agree with the Traders' Co-Ordinating Committee, an influential organisation representing 55 national trading associations, as to the terms and conditions upon which that body would support their application. An agreement was accordingly signed and dispatched to the Transport Advisory Council on the same day. The completion of this agreement means that, with the exception of the Mining Association, the railway companies have reached agreement with all the important interests affected by their proposals. The sub-committee of the Transport Advisory Council will now be able to proceed with the preparation of its report and recommendations for the full meeting of the council, after which it will be submitted to the Minister of Transport. That no time will be lost in drafting the report is indicated by the fact that the committee met on March 9 and 10 for this purpose and proposes to hold meetings on four days next week. An indication of the urgency of the case was given by Mr. Gilbert Szlumper when, in an address to the Portsmouth Chamber of Commerce on March 7, he mentioned the drastic withdrawal of unremunerative railway facilities and the reduction of capital expenditure on modernisation which would be the alternative to a "square deal."

* * * *

Road-Rail Agreement

On March 7 the Associated Road Operators and representatives of the railway companies met at a luncheon given in recognition of the agreement reached between road and rail transport organisations. Mr. Roger Sewill for the Associated Road Operators and Lord Stamp for the railways both welcomed the completion of the agreement as being an important step towards the ultimate goal of the co-ordination of transport. On the same day it was announced that the road haulage interests are prepared to set up central committees for consultation with the different trading organisations on the lines already provided for by the railway companies. It is understood that these committees may be established in conjunction with those of the railway companies or established separately but, in either case, they will afford traders an opportunity of negotiating changes in road rates on similar lines to those which will become operative in respect of railway rates if the road-rail agreement becomes effective.

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The Week's Traffics

The total decline for the four main-line companies for the past week compared with the corresponding week last year was £98,000, contributed as to £4,000 by passenger train traffic, £58,000 by merchandise, and £36,000 by coal. In the 9th week of 1938 there was an increase of £177,000 over the figure for the corresponding week in 1937, made up of gains of £67,000 from coal, of £53,000 from merchandise, and of £57,000 from passenger train traffic. Total receipts for the nine weeks of the current year amount to £24,631,000, a decrease of £1,586,000 or 6·05 per cent. in comparison with 1938.

	9th Week				Year to date	
	Pass., &c.	Goods, &c.	Coal, &c.	Total	Inc. or Dec.	
	£	£	£	£	£	%
L.M.S.R. ..	− 4,000	− 30,000	− 14,000	− 48,000	− 643,000	− 6·04
L.N.E.R. ..	− 4,000	− 22,000	− 19,000	− 45,000	− 619,000	− 7·79
G.W.R. ..	− 1,000	− 9,000	− 4,000	− 14,000	− 272,000	− 6·17
S.R.	+ 5,000	+ 3,000	+ 1,000	− 9,000	− 52,000	− 1·62

Great Northern (Ireland) takings for the week are £2,200 up, and for the year to date goods receipts are up £8,500, and passenger train takings are £550 down. London Transport receipts for the 36 weeks show an improvement of £205,700.

* * * *

The L.N.E.R. Meeting

On his first appearance in the chair at the London & North Eastern Railway meeting last Friday, Sir Ronald Matthews created a very good impression by his conduct of the proceedings on an exceptionally difficult occasion. Absence of any dividends on the £118,379,249 of preference capital made the stockholders restive, and their discontent expressed itself mainly in uninformed criticism of the directors and the management. The Chairman's lucid explanation of the true functions of a directorate had a calming effect, and the meeting dispersed in good humour, after receiving promises of personal attention to the complaints made by one or two stockholders. While warning the meeting that another year like the last would "seriously threaten our whole commercial existence," Sir Ronald Matthews gave a number of reasons for expecting better things in the course of 1939, apart from the benefits likely to accrue from a successful outcome of the "square deal" campaign. The fall in receipts from minerals and heavy merchandise (Classes 1—6) was as much as 16¼ per cent. In the case of the L.N.E.R., leaving coal and coke out of account, over two-fifths of the tonnage of merchandise originating on the system is connected with the manufacture of iron and steel. The sharp setback suffered by that industry last year was particularly felt on the north-east coast. A hopeful sign was that surplus stocks which had accumulated in the maker's hands had now been worked off, and he looked forward to a considerable increase in steel production during the current year. The more clearly defined inclination towards peace

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and the recent trade agreements with other countries were also encouraging factors.

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Overseas Railway Traffics

Traffic on all Argentine railways for the 35th week of the current financial year was weakened by the Carnival holidays and the Buenos Ayres Great Southern decrease for that week was as much as £60,545. In the past two weeks the Central Argentine has gained £44,038, the Buenos Ayres Western £15,385, and the Buenos Ayres & Pacific £2,792. Great Western of Brazil Railway receipts for the past week show an increase of £4,400, and the improvement for the year to date is £20,800.

	No. of Week	Weekly Traffics	Inc. or Decrease	Aggregate Traffic	Inc. or Decrease
		£	£	£	£
Buenos Ayres & Pacific ..	36th	113,648	+ 2,172	2,932,598	— 108,435
Buenos Ayres Great Southern ..	36th	194,975	— 5,521	5,022,828	— 282,133
Buenos Ayres Western	36th	51,303	+ 8,313	1,557,009	— 76,738
Central Argentine	36th	142,059	+ 36,225	4,120,437	— 357,282
Canadian Pacific	8th	494,600	— 12,400	3,779,000	— 160,600
Bombay, Baroda & Central India	49th	219,225	+ 12,375	8,045,850	— 66,450

Gross earnings of the Canadian Pacific Railway for the month of January, 1939, amounted to £1,939,800, a decrease of £123,200, and the net earnings of £92,200 show a fall of £19,200, expenses having been reduced by £104,000.

* * * *

Baltimore & Ohio Interest Payments

The plan for modifying interest charges on securities of the Baltimore & Ohio Railroad Company which has recently been put before the holders of those securities is of particular interest as affecting an undertaking which has for nearly 40 years paid its fixed charges, and during most of that time has also paid dividends upon its preferred and common stocks. Some such plan has become necessary because of unprecedented decreases in the company's earnings and in order to safeguard the security holders from the losses which reorganisation would entail. Security holders are asked to permit the company to withhold some or all of their interest, when necessary, for a period of not more than eight years, but it is hoped that there will be a sufficient revival in business to enable the company to resume full interest payments well before the expiration of that period. More than $450,000,000 of Baltimore & Ohio obligations are affected by the plan, and the holders of more than $425,000,000, or 78 per cent. of the total, have already accepted the plan, but to make it fully effective it will require the co-operation of holders of 90 per cent. in amount of the securities affected. In spite of all efforts to reduce expenses the company was not quite able to earn its fixed charges during 1937, and in 1938 it was faced with the possibility of a receivership and reorganisation. It was to avoid this that the modification plan was thought out.

* * * *

The Problem of the Runaway

The difficulty of dealing with runaways is admittedly considerable; local conditions vary and the circumstances at any given moment largely, if not decisively, influence what can be done. A signalman receiving notice of a runaway has to make up his mind quickly, but not less cautiously on that account, as to what he can do for the best. Fortunately unattended locomotives seldom run away with steam on, but, when one does so, it is of the utmost importance that the fact should be made known some distance ahead with the least possible delay, as it is when loose vehicles run away. If another bell signal is considered desirable we think the present "running away" code might serve to announce unattended vehicles, as its title is really in consonance with that idea, and that the new signal be introduced to cover attended vehicles and being entitled "Train or vehicles passed here without authority," or something of the kind. This would be held to mean that signals had been ignored but that other and more arrestive emergency signals might still be effective. The "running away" code would signify, however, that further signalling would be a waste of time. Some way of stopping telephone conversations and clearing a whole circuit for an emergency warning, all persons to listen, also appears desirable.

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A Suggested Additional Block Bell Signal

On August 4 last an L.M.S.R. goods train got out of control and ran into the rear of a passenger train in Wishaw South station. The shock broke the coupling between the engine and front coach of the latter and knocked the driver off the footplate. The fireman was already absent, and the engine, the regulator of which had been opened by the driver in an endeavour to move his train forward to diminish the threatened collision, ran away, as it unfortunately had no combination valve applying the steam brake upon loss of vacuum. The signalman failed to see that there was no one on the footplate, although he could easily have done so, and signalled the runaway forward as a light engine, thinking the driver meant to stop a little way ahead. Signals were in consequence lowered at several boxes, many of which are closely spaced in this locality, so that there was no time to divert or derail the engine when the signalmen realised it was unattended, although the "Vehicles running away" signal was sent forward expeditiously. The engine attained a speed of some 55 m.p.h., and 3½ miles further on ran into a passenger train moving at 25 m.p.h. near Motherwell Colliery box, a guard being killed. To eliminate waste of time telephoning in such cases, every moment being of importance, Lieut.-Colonel Woodhouse, whose report is summarised on page 439, suggests the introduction of a new bell signal "*Unattended* vehicles running away on right line."

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"Kleinbahnen" or Light Railways?

In view of the meticulous precision which characterises German official circles, it is not surprising to find that the various kinds of railway are clearly classified, but it certainly is surprising that at least one of the standard German dictionaries interprets the well-known railway term *Kleinbahn* so inaccurately as to lead an undiscerning translator completely astray. Our attention was drawn to this recently when one of our correspondents described a line to us as narrow gauge, when we knew it to be standard gauge, and supported his remark by showing that it was described officially as a *Kleinbahn*, which the dictionary in question translated as a "narrow-gauge railway." The official German regulations (*Bahnordnung*) divide railways into two main categories, namely, (*A*) Rail transport systems open to general public traffic, and (*B*) those not open to the public at all. The former comprise main or principal lines (*Hauptbahnen*); secondary lines (*Nebenbahnen*), both standard and narrow gauge; and light railways (*Kleinbahnen*), both standard and narrow gauge. The last-named are sub-divided into light railways using mechanical power, which may be either railways of a type resembling secondary lines (*nebenbahnähnliche Kleinbahnen*) or street tramways; and light railways not using mechanical power, such as horse tramways. Rail transport systems not open to the public at all comprise private sidings and lines in works and factories, and lines of the simplest type such as field railways. These regulations

show conclusively that gauge has nothing to do with a line being a *Kleinbahn*.

* * * *

The Artistic Treatment of Mechanical Subjects

The spirit of the golden age of sail—the halcyon days of the graceful tea clipper and the windjammer—has been captured by the brush of many an artist. Creations of steel and steam, but no less romantic, the present-day counterparts of *Sir Launcelot* and her sister ships have likewise inspired many a fine picture. Railways were slower in gaining the affections of artists—Frith's " Railway Station " is essentially a pictorial satire—and Ruskin, whose influence in all artistic circles in the mid- and late-Victorian era was great, probably found many who detested railways as heartily as himself. Our day, however, has seen the rise of a new art form, the art of the poster, and in recent years the railways have paid increasing attention to this means of advertising. Artists like Norman Wilkinson and Bryan de Grineau have distinguished themselves in the medium of railway poster design. Charles Pears and other artists have produced some fine poster designs to advertise new Southern Railway electric services. From the weekly news bulletin of Imperial Airways we learn that artists are now seeking inspiration from aerial subjects—an amateur artist in the company's Operations Department has just produced a water-colour of the Mayo composite aircraft at the moment of separation of the components. In view of the increasing importance of aerial transport we shall watch with interest the development of the airway poster.

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Streamlined Trains in America

Our American contemporary, *Railway Mechanical Engineer,* in its January issue presents a general survey of the locomotive and rolling stock position on the American railways as now existing, and in so doing prophesies that the year 1939 will represent an improvement in many respects upon the preceding one where the construction of new locomotives and different types of passenger and freight vehicles is concerned. Streamlined lightweight passenger trains increased during 1938 at an accelerating rate. Thirty-one new trains of this kind, operating on faster schedules, were introduced last year as compared with a total of fifty-four such trains during the preceding four years. Lightweight vehicles are also gradually replacing those of older and heavier construction in many other trains. The demand for artistically finished and decorated passenger coach interiors has now been thoroughly established. Few new vehicles are being built which do not reflect the work of the skilled decorator. in many cases on the exterior as well as the interior. New methods of lighting, air-conditioning, improved seating, and *de luxe* toilet and lounge facilities are all features of modern passenger train stock, which tend to make the older coaches, many of which are thoroughly sound from the structural point of view, obsolete from the service standpoint. All the indications point to a steady expansion in the building of lightweight coaches, nowadays made possible by the new structural materials and methods which have become available.

* * * *

Long Boiler Tubes

Although the increase in size of locomotive boilers has, as a rule, increased correspondingly the length of the tubes, such a development is not nowadays regarded with the disfavour it formerly evoked. Improvements in the design and equipment of the boiler mitigate the drawback of the extra length of the tubes—formerly regarded as detrimental in that the value of the tubular heating surface in that portion of the boiler more remote from the firebox was seriously curtailed. With the larger fireboxes now used, often in conjunction with combustion chambers, the tubes are seldom excessively long or regarded as lacking the provision of effective heating surface in the front portion. The smokebox tube plate is in many designs recessed into the boiler barrel, thereby reducing again the length of the tubes. When the late Mr. F. W. Webb introduced the " Greater Britain " class engines, he used a form of combustion chamber midway along the boiler, not so much, it is said, with the idea of improving the combustion of the fuel, but rather because he was seriously perturbed about the tubes, inasmuch as the boiler was the longest ever fitted to a locomotive up to that time.

* * * *

Gas Turbine Locomotives

Proposals to develop the Velox-boilered locomotive one step further, and that—the elimination of the boiler—a very considerable step, were made by Dr. A. Meyer in his paper on the combustion gas turbine read before the Institution of Mechanical Engineers on February 24. Although it is recognised that the thermal efficiency of a locomotive driven by a gas turbine through some form of transmission cannot approach that of a diesel locomotive, some saving in fuel costs might result because of the use of boiler oil in place of diesel fuel oil. Dr. Meyer claimed that a 3,000 h.p. 2-Do-2 gas turbine express locomotive with electric transmission could be built within a weight of 135 tons and a length of 63 ft., and would give a thermal efficiency at the wheel rims of 17 per cent., whereas the 3,000 h.p. 870-lb. geared steam locomotive being tried experimentally in France could scarcely have a thermal efficiency in excess of 12 per cent., and the weight with tender was 194 tons. Even the new turbo-electric locomotive in the United States, each 2,500 h.p., half of which weighs 234 tons and is 100 ft. long, has a thermal efficiency of only 14½ per cent. or thereabouts. But it is not improbable that in this American example the attainment of great power was considered just as important as high efficiency, and it is in just such an instance that the gas turbine locomotive might score over the present-day diesel, particularly as it would be possible for the power plant to operate at a comparatively high efficiency at all speeds and loads.

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Class Fare-war

The ethics of travelling in a class of carriage superior to that to which one's ticket entitles one, make a lachrymose subject, particularly in the case of a certain section of London's Underground; and while Koko might well have added to his inventory " persistent third class trespassers in first class on the Dist.," and thereby have earned applause from the " great unsquashed," we ourselves, for obvious reasons, hold different views. And, apropos, we recall the " crush-hour " incident in which a first class season-ticket holder, after magnanimously yielding his seat to a lady, noticed that the appearance of a collector in the offing caused great embarrassment to his *locum tenens*. Unwilling to witness fair sex paying exc. fare, and recoiling from hazardous subterfuges such as taking her on his lap, changing seats, or even changing tickets, he made comprehensive amends as only a gallant and honourable gentleman could, but, in spite of the current railway odds of 3(rd) to 1(st) against the passenger, we still maintain that, had our Don Quixote firmly refused to " make a gesture " on the ground that one under-ticketed person plus one un-seated ditto cancelled out, he could have won his case. Unquestionably, this is a proposition bristling with innumerable riders; perhaps one of them can solve it.

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Level Crossings and their Abolition

WE have been impressed of recent months by the repeated references to the problem of abolishing level crossings in many of the annual reports which have reached us from overseas railways. With the steady growth in the number of road motor vehicles throughout the world, it is not a matter for surprise that this problem is rapidly becoming acute, especially in those countries where railways were built originally for development purposes and consequently, so far as was possible, heavy capital expenditure on bridges had to be avoided. Naturally the level crossing is somewhat more prominent in flat countries such as Belgium and Holland, in the Prairie Provinces of Canada, and in large areas of the United States of America, and Argentina, as well as in parts of France and the eastern side of England. With the growth of train speeds and, indeed, road speeds, the problem grows more acute with the passage of time, and few will deny that many road users bear a heavy grudge against the railways for the delays occurring at level crossings, though frequently the railway existed before the road itself. In Great Britain, proportionately to its railway mileage, the number of level crossings on public roads is in reality small, being under 5,000, but in the United States there is reputed to be a crossing roughly for every route-mile. Nevertheless, there exist some towns even in England where the level crossing problem is serious, notably Hull, where several of the main roads, some carrying tramways, have to cross the railway lines on the level, and, owing to the land configuration, replacement by under- or over-bridges would be exceedingly costly. It is true that of recent years the Ministry of Transport has authorised many grants, financed out of the Road Fund, towards the cost of level crossing abolition, but there does not appear to be any regular mathematical formula for dividing the cost of abolition between the Government, either local or national, and the railway company, although it is understood that the railway share is limited to the capitalised equivalent of the savings expected to accrue from the elimination of gatemen, crossing keepers, and so forth. The problem of finance has been the main bar to more rapid progress, although the value of what has already been done should not be underestimated.

The question is, however, not only one of railway and road safety, but has been tackled in other countries from the angle of unemployment relief. It is worthy of record that certain governments have now accepted the viewpoint that the urgency of the problem is due to the recent rapid growth of road transport, and therefore the onus of removal of such causes of road congestion and danger is one to be borne by the body responsible for road administration; in reality, either the central or the local government. The United States may be quoted as an instance of this line of approach, and the Federal Government has allocated large sums from its unemployment relief funds to the various States for the abolition or better protection of many of the most dangerous crossings. Under the programme inaugurated in 1935, about 900 level crossings had been abolished by the end of last year, and construction work was in hand on about as many more, while the plans for elimination or better protection had been approved in respect of a further 3,000 or so. Large as these figures are, they form but a small fraction of the nearly 233,000 reputed to be in existence. This is a far cry from what was until recently regarded as the normal practice in the U.S.A., by which the railway was expected to bear 50 per cent. of the total cost and the remaining 50 per cent. to be shared between the local authority and the State. New York State, which has been pre-eminent in ordering the railways to abolish large numbers of crossings, may be instanced as a good example of this policy. In Canada there has existed for almost thirty years a level-crossing fund, but grants in this case are limited to 40 per cent. of the total cost of the project at any crossing. Though contributions from this fund have proved very useful in increasing protection devices at crossings, and by abolishing a large number through road diversions, it is understood that in furtherance of unemployment relief the Government is of the view that it must pay about three-quarters of the cost of abolition in certain cases in order that the most rapid progress in this matter may be achieved. While New Zealand has not yet progressed quite so far, an agreement reached a few years ago provided that an increased share of the total cost of level crossing abolition be taken by the main Highway Board and the Unemployment Board. South Africa is a further country which has to face this problem in an acute form, and in the annual reports of its railways specific references occur quite frequently.

Turning back to Europe, in France (where, of course, there are now national railways) the railways have shared the cost of abolition with the State, and practice has approximated to the British position in that the railway share was usually measured by the savings accruing to it, such as the crossing keeper's wages and reduced maintenance of barriers. The celebrated Marquet plan to relieve unemployment, whereby were financed the standardisation of signalling practice, and electrification of the Paris—Le Mans main line, also made financial provision for the abolition of a number of level crossings. Mention should also be made of the arrangement by which a local authority could raise a small loan, the proceeds of which were to be allocated to the railway improvements situated in that locality. Various useful improvements have been made at several hundred French stations by this means, varying in scale and conception from important schemes for abolishing level crossings to electric lighting of stations, construction of passenger and luggage subways or bridges, and the macadamising of approach roads. The interest on, and amortisation of, these local loans is provided for by a small tax on every passenger and consignment using the station facilities. The main objection to these local surtaxes rests on the complication of accounting which results, but it is a method which might prove applicable to a few special cases in Great Britain, and it relieves the railways of the difficulty of finding the necessary capital funds for the much needed improvement. The German law of 1930 lays it down that the railway must bear the cost of level crossing abolition if such a work is undertaken to improve the railway facilities, but if, as in the majority of instances, such work is done to assist road transport and road safety, the roads department must bear the cost; in such cases the railway must subscribe to the extent of the capitalised savings it will make. Where mutual benefit ensues, the cost is shared equally. In the case of the Swiss Federal Railways the financial burden of the latter has been greatly eased during recent years, because, if a crossing is abolished as a road improvement, the railway share is limited to the capitalisation of the economies expected to accrue to it; much of such work is now regarded in Switzerland as being a desirable form of unemployment relief, in which case but little of the cost is borne by the railways. It is clear from the above brief survey that governments are realising that level crossing abolition is primarily a road problem, and the finances should be treated accordingly. The position in various parts of the world forms the subject of an article in our Road Transport Section this week, at page 411.

Australian Commonwealth Railways

FINANCIAL results of working the Commonwealth Railways, as a whole, for the year ended June 30, 1938, were not as satisfactory as those of the previous year, due very largely to a determination of the Public Service Arbitrator (No. 10 of 1937) under which the basic wage for the main section of employees on the Trans-Australian and the Central Australian Railways was raised from 11s. 4d. to 12s. 6d. a day as from August 1, 1937. There was a loss on working of £68,577 for the year under review, as compared with surpluses of £31,436 and £252, respectively, for the two preceding years. Earnings for the whole system were higher by £684, but working expenses advanced by £100,697. On the Trans-Australian Railway there was an increase in earnings of £1,198 following on the advances shown in the four preceding years. This railway completed twenty years of operation on October 21, 1937. A high standard of service has been maintained from the outset and a number of features for passenger comfort have been originated on this railway. With the extension from Port Augusta to Port Pirie Junction constructed by the Commonwealth and the extension from Red Hill to Port Pirie constructed by the State of South Australia, which were opened on July 26, 1937, additional train mileage was incurred. An extra passenger train each way weekly for the full year, as against 32 weeks only of the previous year, also added to the cost of working. On the Central Australia Railway there was a decrease in earnings of £4,377, partly due to the alteration of the route of the overland journey for passengers to and from Western Australia. Goods traffic increased, but livestock fell off. Expenditure was higher by £28,172, due mainly to the Public Service Arbitrator's determination and to flood damages. Stirling is now the transfer station for goods and livestock being conveyed *via* Port Pirie between Adelaide and Central Australian stations. On the North Australia Railway the loss on working was reduced from £3,673 to £2,665, and on the Australian Capital Territory Railway the net earnings advanced from £1,394 to £1,992.

The figures for the four lines making up the Commonwealth system are summarised as follow:—

	Earnings		Working Expenses	
	1936–37	1937–38	1936–37	1937–38
	£	£	£	£
Trans-Australian Railway (Port Pirie–Kalgoorlie, 1,108 miles 16 ch., 4 ft. 8½ in. gauge)	273,142	274,340	231,659	301,927
Central Australia Railway (Port Augusta–Alice Springs, 771 miles 33 ch., 3 ft. 6 in. gauge)	126,999	122,622	134,767	162,939
North Australia Railway (Darwin–Birdum, 316 miles 40 ch., 3 ft. 6 in. gauge)	35,040	38,165	38,713	40,830
Australian Capital Territory Railway (Queanbeyan – Canberra, 4 miles 75 ch., 4 ft. 8½ in. gauge)	7,068	7,806	5,674	5,814
Total, 2,201 miles 4 ch.	442,249	442,933	410,813	511,510

The length of the Trans-Australian Railway was 28 miles 28 ch. greater in 1937-38 than in the previous year because of the opening of the extension from Port Augusta to Port Pirie. A fast express timetable between Western Australia and the Eastern States came into operation on June 4, 1938. This provides for the saving of a day in each direction. The States as well as the Commonwealth Railways administrations have contributed to the time savings which primarily were made possible by the construction of the Port Augusta—Port Pirie—Red Hill Railway, the ballasting of the Trans-Australian Railway, and the purchase of new locomotives. Among improvements introduced in conjunction with the new service are the Westland express operated by the Western Australian Railways between Perth and Kalgoorlie, and the modern all steel cars operated by the South Australian Railways between Adelaide and Port Pirie Junction. Passengers from Melbourne and beyond have the benefit of the innovation under which sleeping cars travel through between Melbourne and Port Pirie, thus eliminating the necessity for change of trains at Adelaide.

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Railway Wages

THE rejection of the major claims of the three railway trade unions by the Railway Staff National Tribunal in its Decision No. 5, which we recorded last week, was not surprising having regard to (*a*) the magnitude of the claims, and (*b*) the financial position and prospects of the railways. The annual cost of conceding the claims in respect of persons within the scope of the tribunal was agreed by all the parties concerned to be £6,869,000, but the companies contended that if comparable claims were submitted in respect of the rest of the staff concerned, the cost involved would be approximately £25 millions. The tribunal thought that this latter figure " may be open to question " but admitted that " the direct annual cost of £6,869,000 would, in practice, be further increased, through extensions, and might be by several millions." It is worth noting that in its Decision No. 3 (August, 1937) by which costly concessions were granted to the staff, the tribunal took as the basis of its finding not merely the " realised improvement, but the still better prospects for the year from 1937 onwards." During the course of the public proceedings leading up to Decision No. 3, the companies stressed the prospect of increased expenses apart from the effect of any new wage increases. However, the staff tribunal then took the view that the yield from the increase of charges just authorised by the rates tribunal would justify wage concessions running into several millions of pounds. Now, in paragraph 5 of Decision No. 5, the staff tribunal is forced to admit that its " estimate of the prospects upon which Decision No. 3 was based, has not been realised." Furthermore, the tribunal sees that " the movement is now not upwards but downwards, and goes on to record the grim fact that in 1938 receipts fell by £7,710,000. " Even this is not the worst," it says, " for expenditure increased in 1938 by £1,208,000, making the decline in net revenue £8,918,000."

It will not, we think, be out of place to remind our readers that, in commenting on Decision No. 3 in our issue of August 20, 1937, we wrote: " The aggregate is thus likely to be a big total and once again it seems that the tribunal has drawn a big cheque on the companies' account in the Bank of Futurity, trusting to a continuance of good traffics to meet the bill." In paragraph 6 of Decision No. 5 the tribunal makes a curious statement: " We do not mean," it says, " that a claim rejected at one time can never be approved unless the net revenue of the railways is substantially higher than when it was rejected." This opinion, unless it is an indirect reference to the possibility of a wage subsidy, seems to be at variance with the view that was presumably in the mind of the National Wages Board in March, 1931, that net revenue had a claim to be restored to something over £40 millions per annum, and that reductions in labour costs could be justified to secure a net revenue of such an amount. However, the tribunal

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makes itself more clear when it says " it is not to be expected that a tribunal which, less than two years ago, secured the maximum improvement that then seemed justified, should now feel able to recommend large additional concessions at a time when the financial position and prospects are very much worse." As is usual the tribunal's decision will be considered by all the parties, but on the day it was issued the General Secretary of the Associated Society of Locomotive Engineers & Firemen was reported as stating that his Society's Executive Committee had concluded the decision was " unacceptable." Suggestions have been made, too, in some quarters, that because the main claims of the unions have been rejected the machinery of negotiation was held to be operating to the advantage of the companies rather than of the employees. Such a view is not based upon fact. The tribunal has now been established just four years. Its first decision was issued on July 27, 1936, and involved the companies in an extra annual cost of about £1 million. Five months later came Decision No. 2, dealing with claims almost identical to those heard in July, and making no concessions. Decision No. 3 cost the companies about £3 millions a year. Decision No. 4 (July, 1938) dealt with claims concerning only the grades of signalman, relief signalman, and traffic regulator, and although some concessions were granted the National Union of Railwaymen refused to accept the decision. During this past four years the companies have preferred no major claim and it is undeniable that the decisions issued by the tribunal have brought substantial benefits to the employees.

The tribunal has not had an easy task. The public hearing of the most recent claims occupied five days and a very considerable mass of evidence and statistical information had to be sifted and examined. The fact that the Decision was not issued until a month after the public hearing ended on January 31 is a further indication of the deliberate and painstaking manner in which Sir Arthur Salter and his two colleagues reached their conclusions on a very complex series of claims. Furthermore, the tribunal shows clearly that it considered with " sympathetic attention " such a claim as that of the National Union of Railwaymen for a minimum rate of 50s. a week for all adults in conciliation grades. Indeed, in paragraph 7 we are told that the tribunal even went so far as to request the Ministry of Labour specially to prepare information as to the minimum rates in operation in a wide range of other trades and industries of different types, including road transport. At the end of the day, however, the tribunal expressed the opinion that while " a strong case has been presented for making an increase upon the lowest rates a first claim as soon as the financial position makes any substantial concession possible," yet the tribunal recognised that this particular claim would involve a great extra cost and stated it could not be " properly recommended at a time when traffic receipts, and still more net earnings, have fallen so greatly and when the movement is still downwards." In carefully phrased language the tribunal explains its reasons for rejecting claims for higher pay for locomotivemen and salaried staff; for increased annual holidays with pay; and for a reduction in the standard hours of duty to forty a week. The tribunal does, however, make two small concessions, both affecting conciliation grades, the one relating to Sunday turns of duty and the other to the spread-over agreement. The decision on these matters was, we are told, given " on their intrinsic merits " and " with little consideration of the general financial position." The cost of these concessions is probably not large, but we question the wisdom of adding any sum to the companies' heavy burden of labour costs, especially as the tribunal believes that " the prospects for the ensuing year are not likely to be more favourable than the recorded results for 1938." Whether or not this forecast will prove to be more accurate than the one the tribunal made in August, 1937, cannot, of course, be known, but, as we record on page 397 of this issue, the railway traffic receipts of the four main-line railways already show, for the first nine weeks, a decline of £1,586,000.

* * * *

Containers in France and the Netherlands

FOR some time past consignors in France have sent their goods by specially-constructed containers. The National Railways Company has given a fillip to their use for door-to-door transportation by introducing standard types of containers, which are described in an illustrated a ticle on page 413. They are expressly designed for quick loading and unloading, and are mounted on four small wheels. Skids are provided to raise the container off its wheels for loading on to a wagon or other vehicle. The large types are able to take maximum loads of about 4,000 kg. Containers for carrying special consignments are accepted by the railways, but provided by the consignors themselves; they include those for transporting spirits, oils, and even wines. For the carriage of products requiring to be kept at even temperature, consignors have recourse to containers housed in isothermic and insulated coverings. The senders using the railway's containers for a single journey are not charged for return of them empty, but traders owning containers themselves or hiring them from the railways for a period are charged when they are returned empty.

The authorities of the Netherlands Railways have brought out an ingenious type of container, which we describe and illustrate on page 417, and they expect considerable increase in door-to-door transportation to result from its use. When travelling on the road, the container rests on rails on a specially-designed semi-trailer, which is attached to a tractor; when travelling by rail it rests on rails laid transversely on a flat truck; three containers may be carried by each truck. It may be judged, therefore, that transference of the container from road to rail may be simply performed; it has only to be slid off one set of rails on to another, an operation which may be effected by one man. As no cranes are needed for these containers, their use is likely to increase in a country where cranage facilities at stations are few. The containers, which are of welded steel construction, have a capacity of nearly five tons.

* * * *

Locomotive Firebox Trouble

EVERY locomotive engineer is fully cognisant of the troubles that are likely to arise in connection with the boilers, and particularly the fireboxes, of the engines for which he is responsible. Modern practice and metallurgical advances have combined to improve performance in this respect, but there is still truth in the old saying that it is " the boiler that makes or mars the whole outfit." Wear and failure necessitating repairs and renewals in fireboxes are due to causes which vary considerably in frequency and intensity according to the size and shape of the firebox, its method of construction and the conditions under which it is used. In the course of a recent investigation of this subject, we re-read with interest a statement made in the course of a paper read by Mr. Maurice Cook, M.Sc., Ph.D., at a meeting of the Institution of Locomotive Engineers last year which had a particular bearing on the question of deterioration in loco-

motive fireboxes. It was to the effect that among the commonest sources of trouble were: wastage of the side plates, particularly in the fire zone; localised wastage of the side plates around the stay-bolt heads; cracking of flanges, especially at the top of the tube plates; cracking across the bridges between tube holes; and the burning away of flanges. Several of these are associated, at least in some measure, with the fact that at normal firebox temperatures copper has, to all intents and purposes, already exceeded its elastic limit, so that when it is stressed even relatively slightly it deforms plastically and does not recover its original form and shape. It is generally believed that this is one of the major causes of wastage in side plates and of the more local wastage and corrosion around stay heads and indeed of the stay heads themselves. It is true that some of the stay-head wastage is due to abrasion effects from the fire and products of combustion, but there can be no doubt that such wastage at the different points referred to is considerably aggravated by leakage of steam and water between the plate and stays resulting from imperfect thread contact.

Although the manner in which the stays are fitted and the type of stay used may in part account for this, the gradual loosening of staybolts which were originally tight is due to the distortion of the stay threads and of the copper side plates in and near the staybolts by the stresses which arise in service. This leads to steam and water leakage, which accelerates the wastage of both the side plates and the stayheads. With a material having a much higher elastic limit or proportional limit than copper, particularly at firebox temperatures, it might be expected that this chronic cause of trouble could be overcome. Similarly with regard to the tube plates, a reduction in the frequency of tube expansion, with resulting diminished amount of distortion, would itself lessen the extent of bridge and flange fractures. There is evidence, however, that considerable improvements in respect of flange cracking can be effected by ensuring that the thinned part of the flange does not coincide with the position of severest stressing or bending. Burning away of the flanges would be reduced by using a material even more resistant than copper to oxidation under firebox conditions, and would, of course, be entirely eliminated by adopting welding as a method of constructing the box. Such other qualities as high resistance to fatigue and ability to withstand firebox temperatures without softening are also of great importance in firebox material.

The title of the paper referred to was "Copper and Copper Alloys for Locomotive Fireboxes," and its main purpose was that of discussing the relative merits of different materials having copper as their base for the particular purpose named; and in the discussion that followed many references were made to the material known as Kuprodur which, the author stated in his reply, could be welded quite readily by the same technique as is used for copper welding.

LETTERS TO THE EDITOR

(The Editor is not responsible for the opinions of correspondents)

"The Truth About the Railways"

London
February 27

To the Editor of The Railway Gazette

Sir,—We live in a tabloid age. Knowledge which previously required volumes for its adequate exposition is now compressed into handbooks, pamphlets, and even single articles; and when the reader has assimilated the concentrated information so purveyed, he may doubtless congratulate himself that after so little effort on his own part he knows "all about it." If the tabloid facts are correct, no great harm has been done, but when a widely-circulated weekly like *Picture Post* serves up 5½ pages of a hotch-potch of historical scraps and oddments of present-day operating details, seasons the concoction with numerous errors, and advertises the whole as "The Truth About the Railways," the time has surely come to register a protest.

In reply to a correspondent in your issue of February 24, you mention the portrait of Mr. William Whitelaw, credited by *Picture Post* with being Chairman of the Southern Railway, and renamed "Robert Holland Martin." Similarly the general managership of the L.N.E.R. is credited to Sir James Milne. At the grouping the L.M.S.R. is stated to have acquired the Wick and *Leinster* Railway—a useful concern whose lengthy main line from the extreme north-east of Scotland to the extreme south-east of Ireland apparently jumps the Irish Sea *en route*. In 1937, it is stated, the Tyne Improvements Commission purchased the *Clyde* Dock from the L.N.E.R. for £600,000; what Glasgow had to say to this Sassenach intrusion would surely have been worth record.

The Southern Railway is getting on apace with its electrification, for 1,409 out of its 2,162 miles are now electrified—a modest confusion between track mileage and route mileage, but what does it matter? And at the end of last year the L.N.E.R. "was working 6,365 miles of road track," so that apparently the conversion of railways to roads, so ardently desired by some road advocates, is already well in hand. The Flying Scotsman, declares *Picture Post*, has "a cinema, a barber's shop, and a dictaphone carriage," notwithstanding the fact that the second has ceased to run on this train, and neither the first nor the third has ever done so. As to early history, such trifles as 1814 for the Trevithick experiments at Pen-y-Darran, "Newcomman" for Newcomen, and *Grand* Surrey Iron Railway Company hardly deserve mention in comparison with the foregoing "authoritative" statements. A complete exposition of railway signalling occupies a couple of paragraphs from which this gem is culled: "The track is electrically wired for signals of the most modern type—a circular disc placed near the ground so that it can be seen in all weathers." So now we do really know *The Truth*!

VERITAS

The First Northampton Railway

London, S.W.1
March 3

To the Editor of The Railway Gazette

Sir,—In your account of the early railways used as feeders to the Grand Junction Canal, you show that the rails (or plates) used on the Northampton line (1805-1815) were obtained by taking up the Blisworth Rail Road of 1800 to 1805. An interesting point which arises is that the older line was "three miles and upwards in length" (Abraham Rees's "Cyclopædia" says near 3½ miles), and that the Northampton line was about 5 miles long. A suggestion as to where the balance of rails may possibly have been obtained, however, is contained in the following further reference by Rees:—

"The intended cut to Aylesbury was, on account of the scarcity of water at Marsworth, where it was to join the line, changed for a rail-way, and in the year 1803, the same was begun; the iron rails were actually purchased, and brought to the spot, but, alas! in one of those reverses of favour to which borough towns are ever liable, the work was stopped, the rails were ordered to be sold. . . ."

Yours faithfully,

PRAXITELES

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PUBLICATIONS RECEIVED

The South American Handbook, 1939.—London: Trade & Travel Publications Limited, 14, Leadenhall Street, E.C.3. 7 in. × 4½ in. 714 pp. + lx pp. Price 3s. 6d. net.—The sixteenth edition of this annual guide to Latin America maintains, both in its format and in the wealth of information it gives, the high standard of its predecessors. It is indispensable for those whose business or pleasure takes them to a continent with the republics of which Britain has strong commercial and cultural ties. The information can be relied upon as being thoroughly up to date; it is revised every year by correspondents in South and Central America. Useful maps are included and the text is well written. Unfortunately, there are no other illustrations. Students of the geography and politics of the South American countries will find of special value the section headed "Books Recommended," which is an excellent bibliography of books and journals on Latin America.

Report on Air Raid Precautions.—London: Institution of Structural Engineers, 11, Upper Belgrave Street, London, S.W.1. 8¼ in. × 5½ in. 62 pp. Price 2s.—The complete report of the institution, comprising four parts, has now been published. Parts I and II, "A Digest of Public Information" and "Recommendations for Protecting Existing Buildings," first appeared in October last year, and are now reprinted with a few minor alterations based upon additional information available since first publication. Parts III and IV are new, dealing respectively with "Air Raid Shelters" and "New Buildings." In Part I the compilers have collected numerous reports from observers on the effect of bombs used in the hostilities in Spain and China. Considering existing buildings, the report suggests the grading of buildings for the information of their occupants and the public according to their ability to resist the effects of bombing. Two categories are proposed—(*a*) buildings liable to collapse, and (*b*) buildings not liable to collapse. The committtee's preference in the (*a*) class is the frame building of either steel or reinforced concrete having light wall panels that might be sucked outwards after an explosion without causing a collapse of the whole structure. Notes on the selection of a refuge in an existing building conclude this section. Part II is devoted to air-raid shelters, giving specifications for shelters proof against direct hits, or affording protection against blast and splinters. In Part IV the committee gives hints on the design of a new building resistant to direct hits. A structure artificially lighted and ventilated is suggested, with windows reduced to the minimum. If 1-ton bombs are to be resisted, a roof slab of specially reinforced concrete 6 ft. 7 in. thick is required. Such a building is, of course, recommended only for special duties, such as the protection of automatic telephone or other vital communication equipment. Further notes are given on the design of new buildings for more general use.

Handbook for Welded Structural Steelwork. First Edition, 1938.—London: The Institute of Welding, 104, Victoria Street, S.W.1. 8¾ in. × 5½ in. 220 pp. Illustrated. Price 5s. net.—This handbook, the first of its kind in this country, has been published at a time when structural welding is on the threshold of much wider application, both in building and bridge construction. It has been prepared by a committee of structural men and welding experts with the co-operation of firms manufacturing electrodes, and also of the Department of Scientific and Industrial Research. The first part begins with a table of general nomenclature used throughout this book. Then follow technical data for rolled steel and compound sections as used in welded construction. Many new sections are treated in these tables, including their properties, a feature which will greatly facilitate the designer's work. While existing handbooks had to deal only with sections as used in riveted construction, quite a number of special sections and combinations of rolled steel sections had to be included for the special purposes of this new handbook. This applies particularly to tubular sections, compound struts and columns, welded together from plates, angles, channels, and so on.

The second part deals with examples of welded construction. Here the actual calculation of welds and welded joints is shown based on the permissible stresses as set out in the latest L.C.C. Regulations. A special chapter is devoted to welded joints subjected to eccentric loads. Sketches are included representing typical details of column splices, baseplates, beam to column connections, and welded joints of a 60-ft. span roof truss. A chapter on welded plate girders gives many details on the general arrangement and calculation for this type of construction, including also a crane gantry girder of unsymmetrical cross-section. Elaborate calculations are reproduced for rigid frame structures of the two-pin and three-pin type, with reference to the application of the Hardy Cross method to statically indeterminate structures. Although these chapters will be of particular interest in view of the modern trend in building construction, it may be doubted whether the general analysis should be included in view of the fact that it would apply in the same way to riveted or reinforced concrete structures.

The L.C.C. Regulations of December 7, 1937, are fully reproduced and a series of photographic reproductions illustrates effectively the present stage of structural welding in this country, concluding, incidentally, with a photograph of the welded L.P.T.B. bridge at Ladbroke Grove. The handbook will be of considerable help to steelwork designers generally, and by its mere existence should assist in overcoming the prejudice against the application of welding in steel construction.

Alloys for High Temperatures.—This recent publication of Darwins Limited, of Sheffield, is quite a textbook in miniature on the subject of alloys and heat-resisting materials. Besides describing each of the firm's alloys, which are made to meet working conditions where high temperatures are needed, the brochure includes useful information on the theory of heat-resisting materials and the principles guiding the design of the alloys. Darwins Limited seeks co-operation with users in order that particular problems may be investigated and the field of application of such alloys enlarged. A chart at the end of the publication gives the properties of the firm's Pireks heat-resisting materials.

Industrial Heat Engineering.—The Incandescent Group, which comprises four firms specialising in separate branches of industrial heat engineering, has just produced a brochure detailing the products of these companies. Industrial furnaces and equipment are manufactured by the Incandescent Heat Co. Ltd., and heating plant and combustion material by the Selas Gas & Engineering Co. Ltd. Controlled Heat & Air Limited specialises in industrial-ovens and air-conditioning, and Metal electric Furnaces, as its name implies, in electric furnaces for industry. All four companies exchange data and statistics which help the group to give expert advice to the customer on the most suitable plant for his requirements.

Electric Furnaces.—We have received from Birmingham Electric Furnaces Limited, of Erdington, Birmingham, a brochure summarising a paper read before the Coventry Engineering Society, by Mr. J. H. Crossley, the company's Sales Manager. One of the advantages of the electric furnace is that it can be constructed to a variety of designs in order to meet individual requirements; a catalogue, therefore, can give only general information, and so the firm considers that a paper such as Mr. Crossley's is the most convenient form of presenting information to prospective purchasers. For specific jobs, of course, the company supplies detailed and exact data. It is claimed that, at present prices, the majority of heat-treating applications can best be performed in the electric furnace; for some processes, indeed, only electric furnaces can be used. The brochure, which is well illustrated and issued in a handy size, significantly concludes with the words that "the rapid increase in the number of electric furnaces installed and their wide range of application, clearly indicates that where exact heat-treatment is called for, under comfortable working conditions, and at an economical running cost, the electric furnace is now firmly established."

THE SCRAP HEAP

A G.W.R. clerk has written a choral composition, entitled *Captains Three*, which will be sung at the company's annual smoking concert at the Queen's Hall, on March 16. The piece, a eulogy of Faith, Hope, and Love, will be sung by Robert Scott, with a male voice chorus drawn from the 250 Great Western men, who will form the choirs and orchestra in the concert version of *Tom Jones* which is being presented by the G.W.R. London Musical Society.

* * *

I'LL RIDE TO HEBBEN

(*To the tune of "Camptown Races"*)

De railway companies sing dis song,
Doo-dah! doo-dah!
De railroad track am ebber so long,
Oh! doo-dah day!
I buy my ticket, de whistle blow,
Doo-dah! doo-dah!
I travel to Lunnon wid a portmanteau,
Oh! doo-dah day!

Chorus—

Gwine to run all night!
Gwine to run all day!
We'll ride to Hebben up de railroad track
When dey clear de obstructions away.

In Lunnon dey tell me de sad, sad news,
Doo-dah! doo-day!
De millions ob money de companies lose!
Oh! doo-day day!
De railways wan' for de lines to be clear,
Doo-dah! doo-dah!
It ain' gwine to put up de price ob beer!
Oh! doo-day day!
(Chorus as before)

De railways ask for a square deal now,
Doo-dah! doo-dah!
Dey wan' mo' money, but de Law don' allow,
Oh! doo-dah day!
De stationmaster he shake his head,
Doo-dah! doo-dah!
I give de tip to de porter instead.
Oh! doo-day day!
(Conclude with chorus as for verse I)

M. M.

* * *

THE DISABILITIES OF FATNESS

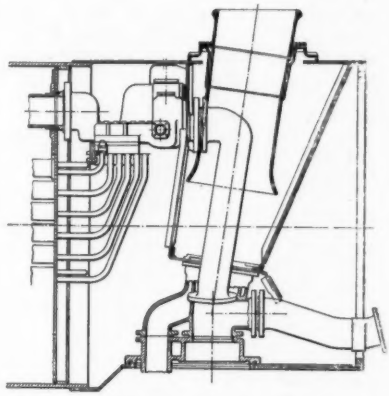
The Hungarian railway authorities have just added another to the many disabilities under which the excessively corpulent suffer. In future any person requiring more than the average amount of sitting space in railway trains will have to pay an excess charge of five shillings. Perhaps, however, this is a little better than not being allowed to travel at all. Only eight years ago there died Robert Roggendorf, the fattest German of his time. He weighed 48½ stone, and was never allowed to board a train, tramcar, or an omnibus, though naturally such people require transport even more urgently than the rest of us.—*From the "Manchester Guardian."*

ELEPHANT BORN IN REICHSBAHN WAGON

During the night of September 1–2, 1938, an altogether sudden and exceptional rise of the river Neisse in Germany caused disastrous flooding in the town of that name and did a great amount of damage, completely severing connection with the outer world for some time and interrupting electric light, gas, telephone, and drinking water facilities. A railway bridge was washed away and others rendered useless or considerably damaged, bringing all traffic to a standstill. Military and railway servants were called out to aid the townspeople and assist in re-establishing communication as speedily as possible. A circus train happened to be at the station and some anxiety was caused by the inability to get food for the animals, some of which, it was feared, might become unmanageable in consequence. In the midst of these anxieties an elephant provided some diversion for the shunting staff dealing with the wagons by giving birth to a baby, the first occasion this is known to have occurred on the Reichsbahn. On September 5 the train left for Hanover where parent and child were installed safely in the Zoological Gardens.

* * *

A correspondent just back from a visit to the United States says that on one of his journeys he noticed, on an adjoining track, a locomotive which apparently had been in some sort of an accident as the result of which its chimney had got knocked out of vertical. It was only a fleeting glance, after, as he confessed, a rather heavy and prolonged lunch with some friends. "Was it an optical illusion?" he asks "or do the engines actually run about with groggy chimneys?" The chimney, it is



stated, seemed quite undamaged but leaning forward at a quite alarming angle.

Reference to the appended drawing, reproduced from the American "Locomotive Cyclopedia," will serve to clear the matter up. The 2–8+8–2 compound Mallet engines of the Norfolk & Western Railroad as shown have inclined chimneys, the purpose being to allow of a reduction in the length of the smokebox.

A SQUARE DEAL WITH YOUR HELP IN 1939
FIGHTING FOR FREEDOM!
MAIN LINE BOOKING OFFICE
ENTRANCE
EXHIBITION OPEN TO THE PUBLIC 1PM TO DAY
BRITISH RAILWAYS 1939

Last week (at page 356) we illustrated the temporary building on the concourse at Waterloo station, Southern Railway, in which is housed the "Fighting For Freedom" exhibition. The hut has a scenic frontage representing a goods train, and Mr. C. Grasemann, Public Relations and Advertising Officer, Southern Railway, has sent us the unusual view reproduced above which he suggests should be called "Through the Buffer Stops at Waterloo"

OVERSEAS RAILWAY AFFAIRS

(From our special correspondents)

BRAZIL

1939 Budget

In his estimates for the current budget the Minister of Transport allotted the sum of 107,159 contos of reis for undertakings necessary on the railways controlled by the State. Some of the principal works to which this amount is to be applied are as follow :—

	Contos
D. Thereza Christina Railway : for bridges at Laranjeiras and over the River Araranguá ..	4,000
Continuation of construction of the Jaguaribe — São Thiago — São Luiz—São Borja Railway by the 1st Railway Battalion	4,000
Continuation of construction of the D. Pedrito—Sant 'Anna do Livramento branch line by the 1st Railway Battalion	2,000
Construction of lines from Pelotas to Santa Maria and from Rio Negro to Caxias	6,000
Central Railway :—	
Continuation of Dom Pedro II new station	8,000
Doubling of the Rio d'Ouro Railway (now incorporated in the Central Railway)	2,000
Widening of Piquete branch line	3,000
Widening of Lauro Muller viaduct	3,000
Doubling of Santa Cruz branch line and completion of work on the electrified section from Deodoro to Bangú	2,000
Construction and modification of locomotives and workshops' equipment	3,200
General improvements	6,000
Rêde de Viação Cearense; General improvements	3,000
Viação Ferrea Federal Leste Brazileiro ; relaying	6,000
Contractual obligations :—	
Central Railway : for the payment of 12 instalments totalling £456,000 (obligations assumed by force of Decrees Nos. 24,238 and 24,614 of May 11 and July 7, 1934, respectively)	39,921

Returned Empty Traffic

As a result of a suggestion made by the Rêde Mineirade Viação, the Railway Clearing House has adopted a new system of control for dispatches of returned-empties in interchange traffic. From now on, returned-empty boxes, crates, and sacks will be accepted for forwarding at the cheap returned-empty rate only on presentation of a voucher issued at the time of dispatch of the original consignment. This voucher will be made out with three extra copies at the original forwarding station and will be handed to the consignor together with the bill of lading. The three copies will be sent to the Audit Department. This department will then send one copy to the Audit Department of the railway receiving the consignment, and a further copy to the Railway Clearing House, while the third copy will be kept for reference. The original dispatch will show the date and number of the return voucher, which will be collected when the return dispatch is made and accompany the consignment as witness that this is entitled to enjoy the cheaper freight. Return vouchers will be valid for three months, and it is hoped that under this new system certain abuses, such as forwarding new bags, crates, and boxes as returned-empties, will be avoided.

Bahia South Western Railway

The balance sheet of this company for the year ended April 30 last has now been published and shows receipts as £40,694 and expenditure £29,312, representing increases of £5,819 and £1,586 respectively on the previous year's totals. Although the cocoa crop and export from the port of Ilhéos were appreciably greater than in the previous year, the amount transported by rail was much the same as in that period.

Araraquara Railway

Recent improvements on this railway include new station buildings at Mirasol, Catanduva and Taquaratinga, and also the reconstruction of the stations at Ignacio Uchôa, Ibarra, and Japurá. A new station at Rio Preto, as also the installation of electric staff apparatus on the Catanduva–Mirasol section, is to be put in hand shortly. The purchase of land has been authorised by the Government for remodelling and extending various station layouts, and the stone-ballasting of all track is nearing completion. Greater activity in the building of new workshops at Araraquara and the resumption of work on the extension to Porto do Taboada are still further indications of the prosperity prevailing on this railway.

ARGENTINA

State Railway Accidents

Two serious accidents, both attended with loss of life, occurred on the State Railways during the month of January. The first of these took place on the Central North Argentine line between the City of Cordoba and Capilla del Monte, when a passenger train became derailed a short distance from Casa Bamba station, some 35 km. from Córdoba, while passing round one of the numerous sharp curves which abound on this section. The locomotive was dashed against the hillside, the driver and fireman being instantaneously killed and 15 passengers injured. The mishap is attributed to excessive speed.

The second accident, which was one of the worst in Argentine railway history, occurred early on the morning of January 16, on the Córdoba Central (State) line near Frias station in the Province of Santiago del Estero. Owing to heavy rain having undermined the foundations of the bridge over the Albigasta River, two of the spans collapsed just as a train consisting of a locomotive, goods wagon and water tank wagon, on which a permanent way contractor's gang of 15 men was travelling, was in the act of crossing. The whole train plunged into the river, which was in flood to the depth of over 20 ft. Altogether 18 lives were lost, including the driver and two other men on the locomotive. The bridge, a steel structure built in 1893, consisted of 6 spans of 20 m. each. For some days traffic over the Córdoba Central route between Buenos Aires and Tucumán had to be diverted to the Central North Argentine line *via* Santa Fé, pending the construction of a temporary bridge, work on which was held up by a continuance of the floods.

CANADA

Railway Souvenir of Royal Tour

A souvenir book in connection with the Royal visit is being prepared jointly by the Canadian Pacific and the Canadian National Railways at the request of the authorities in Ottawa. The book will be in the form of an illustrated itinerary of the tour, with articles by some of Canada's foremost authors. Details of this publication, which, it is believed, will be given to Their Majesties and the official group making the trans-Canada trip, as well as members of the national and municipal reception committees, have not yet been made public.

The Quebec Central Railway

According to Mr. G. D. Wadsworth, General Manager of the Quebec Central Railway, overlapping of certain services performed by both the Canadian Pacific and by his own railway is being studied with a view to elimination without impairing the service. Some of the Quebec Central staff found surplus when the study is completed, will probably be absorbed in the Canadian Pacific service in Montreal, he said, and he also gave assurance that there was no foundation for the rumour that the administration of the Quebec Central would be moved from Sherbrooke to Montreal. " The Quebec Central failed to earn its operating expenses last year and, as the prospects for 1939 are even less encouraging the need for economy is most urgent," Mr. Wadsworth concluded.

INDIA

Rail Welding

A severe test of welding rails into long lengths is being made in India, where very high sun temperatures are recorded. Experimentally, 1,000 joints are being welded by the Thermit process, on the North Western, East Indian, and Great Indian Peninsula Railways. Those on the former system are being laid in the main line between Jullundur and Ludhiana, and will be watched with the greatest interest, as the Punjab is subjected not only to the highest, but also to the lowest temperatures in the plains of India. So

far, 1·71 miles on the up main line near Jullundur have had lengths of three 42-ft. rails welded together to form 126-ft. lengths between joints.

Research for and by the Mechanical Departments

A press message states that several devices have recently been tried with a view to reducing that special bugbear of Indian railways, the hot box. The Bengal-Nagpur Railway has evolved a re-packable keep device, which facilitates work upon bearings, and reduces the cost of periodical maintenance. A concertina device has been introduced on the East Indian Railway for shielding box bearings from dust and sand. It is used for locomotive bogies, trailing trucks, tenders, and rolling stock. This railway has also a lip bearing, which has proved effective, for lengthening the life of the journal, whether on a tender or rolling stock, and in reducing lateral play and wear. Other dust and water shields sponsored by the Central Standards Office have been satisfactory in protecting boxes from sand, rain, and washing-out water. A committee of metallurgists and chemists has issued three reports during the last year on the bonding of bearings and the reduction of whitemetal thickness now possible owing to reduced wear, and much investigation has been carried out on various lubricants. A large-scale set of tests is being carried out on different oils; the North Western Railway is using mineral oil, the cheapest; the Eastern Bengal Railway, a mixture of free fatty acid and mineral oil; the Great Indian Peninsula Railway, mineral oil and rape oil; and the East Indian Railway, pure castor oil, the most expensive.

EIRE

Road Competition

In this country a public service vehicle is one which is licensed to carry a number of passengers for reward, although each individual passenger may pay his own fare. A hackney car is a vehicle, such as a taxi, which is hired out to one person. The former would govern the definition of a bus.

The proof of the irregular competitive practices with which the Great Southern Railways have had to contend was evidenced on February 8 in the Dublin Courts when a defendant was fined £10 on each of two charges for using a motorcar as a public service vehicle, without a proper licence. Defendant's son was charged with being the driver of the motorcar.

It appears that in these cars six passengers can be carried and also that the charge was 15s. a head as from Dublin to Ballina. Assuming that these passengers were conveyed the whole way at this figure, the receipts would be £4 10s., and, as the mileage there and back amounts to 332, it will be seen that the earnings were over 6d. a mile, although on other days a similar trip might not earn £2; the railway company is deprived of these fares on trains provided to meet public demands.

The Justice stated that the traffic of the whole country was at stake and that it was easy to understand how the whole railway system was vanishing into thin air. The case is quoted as an example of the railway difficulties in maintaining traffic.

Harvesters to England from the West of Ireland are engaged by gangers, and, although the numbers ought normally to warrant special trains, owing to irregularities of this kind there are no difficulties in conveying the passengers by ordinary train. When the men are engaged it happens frequently that the local hackney car owner is asked to take these people to Dublin at a cheap rate and the practice, evidently growing, has been brought to light by the prosecution in this case. The fine inflicted may prove a deterrent to future activities of this kind.

UNITED STATES

Pennsylvania Railroad at Golden Gate Exhibition

The Pennsylvania RR. display at the San Francisco Golden Gate Exhibition will be housed in the Vacationland building, and as well as a large map, will include coloured dioramas with scale model trains illustrating modern freight and passenger train working with complete sound effects. These models will include an electrically-and a steam-hauled streamlined passenger train, and a heavy steam-hauled freight train. Between the diorama showings, cinema pictures will depict modern railway service and progress.

Large-scale sectional models of the interiors of the new Broadway Limited cars will call attention to their luxury, and to emphasise safety in operation, a standard position-light signal of the latest pattern will continuously show "clear," "approach," and "stop" in recurring cycles.

TASMANIA

Transport Act Provides for Transport Board

An item of outstanding interest has been the passing of the Transport Act by Parliament. The Act had a stormy passage in the Legislative Council. On the first occasion of its being presented it did not pass the second reading, and it was necessary for a special session of Parliament to be held to enable the Bill to be considered again this year.

The Act as it stands provides for the appointment of a Commissioner for Transport who shall be assisted by two part-time associate members of a Board of Transport. A General Manager of Railways is to be appointed by the Commissioner of Transport. Applications are being invited for the position of Commissioner of Transport carrying a salary of £2,000 per annum.

Railway Department to Disappear

Under the provisions of the Transport Act the Railway Department will cease to exist as a separate entity, as the control of the railways will pass to the Board of Transport. The effect of the change cannot be forecast, and only the future will reveal whether the passing of the Act will have the effect of bringing about an improvement in the railway finances.

EGYPT

King's Gift to Railway Museum

A working model of a horizontal two-cylinder steam engine complete with a vertical boiler working a model centrifugal pump and dynamo has been presented to the Fuad I Railway Museum in Cairo by King Farouk. The model was made in the early 'nineties at Boulac railway workshops for the Khedive Abbas Hilmy II and comprises all fittings and accessories. The railway museum owes its existence to the King's father, King Fuad I, and was described and illustrated in THE RAILWAY GAZETTE of January 27, 1933 (page 112).

SPAIN

The Bilbao River & Cantabrian Railway

It is announced that the *Diputacion Provincial de Viscaya* has acquired by purchase the railway running between Galdames and Sestao, which has been owned and worked by a British company, the Bilbao River and Cantabrian Railway Co. Ltd. This narrow-gauge railway has been devoted for many years past to the transport of iron ore from the mines to the blast furnaces and to the loading piers at Portugalete for export. No passenger or other public traffic is carried. The railway, 23 km. (14 miles) in length, was built in 1872, when the Bilbao iron mining industry began to flourish after the Franco-Prussian War, and the properties now in negotiation with the Biscayan Provincial Council include valuable riverside land sites at Portugalete, as well as 13 mining properties, which are at present leased to the Altos Hornos Company. It is calculated that no less than 33 million tons of iron ore have been carried by this railway during its 66 years of existence. The company, whose offices are in London, was placed in voluntary liquidation by a special resolution of the Board of Directors dated May 6, 1937. According to the local press the process of nationalisation of industry, and especially of undertakings now under foreign control, is to have a prominent part in the future local government of the northern provinces. It is understood that the Galdames—Sestao line will be worked by the Triano Railway.

XUM

BRITISH RAILWAY STATISTICS

"The Railway Gazette" monthly table for November, 1938, as compared with November, 1937, compiled from the Ministry of Transport Statement No. 228

Description	Great Britain*	G.W.R.	L.N.E.R.	L.M.S.R.	S.R.
PASSENGER TRAIN TRAFFIC—					
Number of pass. journeys (ex. season ticket holders)	97,561,894	6,422,685	13,048,271	21,299,349	17,449,515
Increase (+) or decrease (—)	— 3,356,270	— 121,268	— 729,874	— 638,486	+ 332,832
Passenger receipts (excluding season ticket holders)	£3,430,490	£434,899	£668,239	£1,018,121	£744,142
Increase (+) or decrease (—)	— £52,429	+ £5,997	— £16,300	— £23,735	+ £6,546
Season ticket receipts	£803,924	£44,691	£132,841	£195,663	£282,482
Increase (+) or decrease (—)	— £13,281	— £2,932	+ £2,523	— £10,228	+ £5,218
Parcels and misc. traffic receipts (excluding parcels post)	£1,062,064	£195,214	£327,346	£403,275	£119,262
Increase (+) or decrease (—)	— £25,449	— £9,307	+ £7,764	— £21,656	+ £853
FREIGHT TRAIN TRAFFIC—					
Freight traffic (tons) (excluding free-hauled)	21,054,833	5,055,110	9,661,278	9,748,862	1,160,994
Increase (+) or decrease (—)	— 3,339,100	— 826,946	— 1,505,978	— 1,627,263	— 81,073
Net ton-miles (excluding free-hauled)	1,211,478,549	222,623,339	410,797,041	494,916,245	49,078,813
Increase (+) or decrease (—)	—185,757,228	— 35,165,825	— 68,552,707	— 71,118,916	— 6,922,365
Average length of haul (miles) (excluding free-hauled)	57·54	44·04	42·52	50·77	42·27
Increase (+) or decrease (—)	+ 0·26	+ 0·21	— 0·40	+ 1·01	— 2·82
Freight traffic receipts	£6,984,397	£1,221,500	£2,327,551	£2,854,000	£359,839
Increase (+) or decrease (—)	— £1,007,344	— £131,900	— £360,864	— £460,000	— £26,049
Receipts per ton-mile	1·384d.	1·32d.	1·36d.	1·38d.	1·76d.
Increase (+) or decrease (—)	+ 0·011d.	+ 0·06d.	+ 0·01d.	— 0·02d.	+ 0·11d.
Freight train-loads: Average train-load (tons)	123·89	129·07	128·62	122·31	95·36
Increase (+) or decrease (—)	— 9·00	— 10·33	— 9·47	— 8·02	— 11·84
Net ton-miles—					
Per train engine-hour	976·50	1,037·73	1,017·36	951·20	740·09
Increase (+) or decrease (—)	+ 50·99	+ 55·80	+ 15·96	+ 85·62	— 45·33
Per shunting-hour	868·02	765·72	951·92	918·43	535·84
Per total engine-hour	459·53	440·61	491·77	467·26	310·81
Net ton-miles per route-mile per working day	2,676	2,629	2,874	3,165	1,045
Increase (+) or decrease (—)	— 391	— 394	— 455	— 431	— 152
Wagon-miles. Total	353,355,377	63,122,930	125,452,207	147,919,935	16,534,292
Increase (+) or decrease (—)	— 27,038,286	— 5,153,024	— 10,151,966	— 10,875,250	— 833,514
Percentage of loaded to total	67·20	68·79	64·79	68·52	67·63
Wagons per train. Total	33·98	33·74	34·60	34·10	30·33
Increase (+) or decrease (—)	— 0·19	— 0·57	— 0·04	— 0·05	— 0·81
Loaded	22·83	23·21	22·42	23·37	20·51
Empty	11·15	10·53	12·18	10·73	9·82
Train-miles. Coaching—Per train-hour	15·21	14·07	14·27	14·35	18·35
Per engine-hour	12·32	11·20	11·05	11·13	15·71
Train-miles. Freight—Per train-hour	9·29	9·74	9·27	9·15	9·46
Per engine-hour	3·71	3·43	3·88	3·82	3·21
Engine miles. Total	46,043,472	7,333,874	12,770,500	16,783,606	6,371,618
Increase (+) or decrease (—)	— 1,803,197	— 327,839	— 704,323	— 895,095	+ 173,152
Mileage run by engines. Total train-miles—					
Coaching	23,172,151	3,128,312	5,253,294	7,318,680	4,830,394
Freight	10,398,846	1,870,940	3,625,452	4,338,391	545,197
Engine-hours in traffic. Total	4,886,328	850,549	1,482,111	1,874,476	495,189
Increase (+) or decrease (—)	— 486,037	— 81,558	— 144,907	— 243,079	— 11,546
Shunting miles per 100 train-miles—					
Coaching	7·39	7·12	6·77	7·74	8·21
Freight	70·81	84·00	66·07	65·10	92·36

Passenger Traffic Statistics: Number of journeys, receipts, and receipts per journey (excluding season ticket holders)—November, 1938

Subject	Great Britain	G.W.R.	L.N.E.R.	L.M.S.R.	S.R.	Cheshire Lines	Liverpool Overhead	L.P.T.B.†	Mersey
Full fares—									
Pass. journeys	31,620,873	571,087	821,650	1,189,367	2,511,147	11,874	155,804	25,581,717	80,276
Gross receipts	£784,951	£60,235	£105,312	£103,683	£153,148	£2,125	£1,653	£344,940	£1,377
Receipts per pass.	5·96d.	25·31d.	30·76d.	20·92d.	14·64d.	42·95d.	2·55d.	3·24d.	4·12d.
Reduced fares—									
Excursion and week-end—									
Pass. journeys	34,068,900	3,450,742	7,630,958	11,399,206	8,053,262	363,610	74,107	1,516,472	645,549
Gross receipts	£1,849,740	£280,999	£411,681	£652,333	£414,244	£19,095	£724	£32,551	£9,601
Receipts per pass. journey	13·03d.	19·54d.	12·95d.	13·73d.	12·35d.	12·60d.	2·34d.	5·15d.	3·57d.
Workmen—									
Pass. journeys	28,390,497	1,946,811	3,859,823	7,713,946	6,134,984	272,122	238,686	7,039,796	274,866
Gross receipts	£430,126	£29,894	£65,567	£129,504	£104,009	£4,635	£2,102	£80,705	£2,410
Receipts per pass. journey	3·64d.	3·69d.	4·08d.	4·03d.	4·07d.	4·09d.	2·11d.	2·75d.	2·10d.
Other—									
Pass. journeys	3,474,422	452,767	734,432	993,646	749,044	27,966	51,405	396,927	10,213
Gross receipts	£355,829	£61,883	£83,633	£127,627	£71,879	£3,802	£347	£3,599	£171
Receipts per pass journey	24·58d.	32·80d.	27·33d.	30·83d.	23·03d.	32·63d.	1·62d.	2·18d.	4·02d.
Total—									
Pass. journeys	97,561,894	6,422,865	13,048,271	21,299,349	17,449,515	675,642	520,002	34,534,912	1,010,904
Gross receipts	£3,430,490	£434,899	£668,239	£1,018,121	£744,142	£29,728	£4,826	£461,795	£13,559
Receipts per pass.	8·44d.	16·25d.	12·29d.	11·47d.	10·23d.	10·56d.	2·23d.	3·21d.	3·22d.

* All standard gauge railways

† Includes passengers originating on the railway undertakings, and on the Whitechapel and Bow Joint Railway

ROAD TRANSPORT SECTION

This section appears at four-weekly intervals

London Transport Further Bus Power Proposals

CLAUSE 44 of the London Passenger Transport Board Bill, which is headed "Further power to board to run public service vehicles," has been withdrawn, and with it have disappeared petitions against the clause from the Thames Valley Traction Co. Ltd., and others, from the Commercial Motor Users' Association and road passenger transport operators in London and the Home Counties, and from the Kent County Council. Subclause (2) of the clause in question would have provided that "Notwithstanding anything in the Act of 1933 it shall be lawful for the board with the consent of the Traffic Commissioners to provide road services of stage and express carriages on any road outside the London Passenger Transport Area for the purpose of reaching any place which is (*a*) adjacent to the boundary of that area; and (*b*) in the opinion of the Traffic Commissioners not being and not likely within a reasonable period to be provided with efficient and convenient services by another person." These proposed powers were, however, to be limited by the proviso in subclause (9) that nothing in Clause 44 should enable the board to run any service of stage or express carriages outside the London Passenger Transport Area except within a radius of ten miles (or in the County of Kent five miles) from any point on the boundary of that area. Under Section 18 of the London Passenger Transport Act, 1933, the board already has power by agreement with other operators to run services within the ten-mile and five-mile limits just mentioned, although these powers have not so far been exercised. After the withdrawal of Clause 44 the Bill was given a second reading in the House of Commons on February 14.

Motor Road Earthwork Technique

PROFESSOR DR.-ING. LEO CASAGRANDE, a senior colleague of Dr. Fritz Todt, lectured on February 20 before the Engineers' German Circle at the Institution of Civil Engineers on "Special Measures of Earthwork Technique in the Construction of the German State Motor Roads." Professor Casagrande said that the German State Motor Roads were laid out for a speed of 160 km. per hour (100 m.p.h.). Superelevation, and view ahead, together with complete freedom from crossings, were all calculated with this end in view. This presented no great difficulty; the real difficulty was to find a surface covering which would withstand these speeds. The methods hitherto used in Germany and other countries were inadequate to ensure a surface of the requisite evenness. Whereas small irregularities were of no great importance at the much lower speeds of about ten years ago, for the speeds envisaged they would be dangerous and quite inadmissible. Two main causes were responsible for the unevennesses which formerly appeared in German road construction, namely, the softening of the ground under the road surface as a result of the accumulation of moisture, and the irregular settling of the embankment into the softer subsoil. The accumulation of moisture led to the formation of waves, particularly with surfaces laid upon broken stone on clayey ground. To the same cause was also attributed the so-called frost damage which appeared in winter time in the form of irregular protrusions, due to the formation of ice which subsequently melted, leaving hollows or broken places. Such damage cost 250 million RM. per annum in Germany a few years ago. Its complete elimination has now been achieved by incorporating a layer of sand or gravel 10-60 cm. (4 in. to 2 ft.) thick, according to the locality, immediately beneath the surface foundations. Soft subsoils were left under the ordinary roads, which were repaired as required. In the case of the State Motor Roads such subsoils were removed by a blasting technique which originated in America, and the second part of Dr. Casagrande's lecture was devoted to a description of the progressive stages in the development of this technique, and its illustration by a remarkable film. It had proved very successful. Taking a cross section of the road, three explosive charges were sunk, one at each side, and one beneath the road site itself. The subsoil in the centre was forced by the explosion of the latter into the cavities caused by the explosion of the outer charges, and the film showed clearly with what unfailing regularity this procedure produced the desired result. Whereas the cost of excavating for average depths worked out at 4-5 RM. per cubic metre, the new technique reduced this to 0·4-1·0 RM. In this way, in the last few years, some 2,000,000 cu. m. of peaty soil have been removed during the construction of the State Motor Roads alone. In the subsequent discussion Dr. Casagrande mentioned that the same technique had been used for railway construction.

British Railways and Road Transport

AN interesting feature of the annual accounts of the four main-line railway companies in recent years has been that section of Account No. 8 (Revenue Receipts and Expenditure of the Whole Undertaking) which shows the return on the capital invested in the numerous passenger and freight road transport concerns with which the railways have become associated since 1928. On the passenger side, the railways have large shareholdings in over thirty of the principal road transport undertakings operating in the provinces, details of which are given in the accompanying table. The purchase of these shareholdings has cost the companies the sum of £9,841,883, and the profitable nature of the investments is indicated by the high return secured last year. The G.W.R. has investments totalling £2,300,133, which yielded a return of £263,935, or 11½ per cent. compared with 8 per cent. in 1937; the L.N.E.R. secured a return of £347,533 on its holdings of £2,436,221, namely, 14¼ per cent. compared with 11¾ per cent. in the previous year; and the L.M.S.R. investment of £3,067,489 returned £346,525, or 11¼ per cent. compared with 10¼ per cent. in 1937. The Southern Railway Company has £2,038,040 invested in passenger road transport undertakings; as these are not charged to capital expenditure the details are not given in the annual accounts, but by the courtesy of the Joint Accountant, Mr. R. G. Davidson, we are enabled to include particulars of the nominal holdings and earnings. The L.N.E.R. and L.M.S.R. also have amounts of £87,023 and £278,654 respectively invested in passenger road transport undertakings operated by certain municipalities under joint arrangements with the railway companies. The four main-line companies thus have a total of £10,208,000 invested in passenger road transport. Apart from the satisfactory

financial results, the association of the main-line railways with the principal bus companies affords certain advantages to the public, not the least of which is the interavailability of rail and road tickets between more than 1,000 towns and villages in Great Britain. Co-ordination of the two forms of transport has also resulted in the extension of bus services to make direct connections with stations in urban and rural districts, and the provision of alternative travel facilities in the event of mishap or breakdown, while in many towns the station yard is now the local bus centre, thus facilitating the transfer of passengers from rail to road and *vice versa*.

Although not returning such a high rate of interest as the shares in bus companies, the railway companies' investments in road haulage undertakings also produce very good earnings. At the end of last year they amounted to £2,555,076, of which sum £1,342,996 is invested in Carter Paterson & Co. Ltd. (equal shares of £335,749), and £840,284 in Hay's Wharf Cartage Co. Ltd. (of which Pickfords Limited is a subsidiary). In addition, the L.N.E.R. holds £84,808 in Currie & Co. (Newcastle) Ltd., and £17,000 in J. W. Petrie Ltd., while the L.M.S.R. has £135,049 invested in Joseph Nall & Co. Ltd., and £134,939 in Wordie & Co. Ltd. The interest upon these investments last year amounted to £148,091 or 5¾ per cent. (the same as in 1937), and the most profitable holding was that in Hay's Wharf Cartage Co. Ltd., which yielded a return of 10½ per cent.

Apart from their shareholdings in passenger and freight road transport undertakings, the railways have incurred

RAILWAY SHAREHOLDINGS IN PASSENGER ROAD TRANSPORT AT DECEMBER 31, 1938, SHOWING EARNINGS FOR THE PAST YEAR

Associated Company	Issued Share Capital	L.N.E.R.		L.M.S.R.		G.W.R.		S.R.	
		Holding	Earnings	Holding	Earnings	Holding	Earnings	Holding	Earnings
		£	£	£	£	£	£	£	£
Aldershot & District Traction Co. Ltd.	200,000 Ord.	—	—	—	—	—	—	66,112	5,289
W. Alexander & Sons Ltd.	450,000 Ord.	50,000	30,000	50,000	30,000	—	—	—	—
	450,000 6% Part. Pref.	175,000		175,000		—	—	—	—
Birmingham & Midland Motor Omnibus Co. Ltd.	1,440,000 Ord.	—	—	432,000	54,000	288,000	36,000	—	—
	100,000 8% Cum. Pref.	—	—	—	—	—	—	—	—
City of Oxford Motor Services Limited	226,000 Ord.	—	—	—	—	113,000	10,346	—	—
	74,000 6½% Cum. Pref.	—	—	—	—	—	—	—	—
Crosville Motor Services Limited	1,100,000 Ord.	—	—	412,071	32,966	137,357	10,988	—	—
Cumberland Motor Services Limited	150,000 Ord.	—	—	49,999	6,896	—	—	—	—
Devon General Omnibus & Touring Co. Ltd.	200,000 Ord.	—	—	—	—	40,917	5,115	27,279	3,410
	150,000 7% Cum. Pref.	—	—	—	—	—	—	—	—
Eastern Counties Omnibus Co. Ltd.	756,000 Ord.	184,089	25,736	25,282	3,535	—	—	—	—
	200,000 5% Cum. Red. Pref.	—	—	—	—	—	—	—	—
Eastern National Omnibus Co. Ltd.	900,000 Ord.	225,000	22,043	225,000	22,043	—	—	—	—
East Kent Road Car Co. Ltd.	450,000 Ord.	—	—	—	—	—	—	151,355	12,108
	200,000 6½% Cum. Pref.	—	—	—	—	—	—	—	—
East Midland Motor Services Limited	187,500 Ord.	62,500	8,621	31,250	4,310	—	—	—	—
East Yorkshire Motor Services Limited	300,000 Ord.	149,362	20,602	—	—	—	—	—	—
Hants & Dorset Motor Services Limited	550,000 Ord.	—	—	—	—	—	—	213,556	26,243
	150,000 6½% Cum. Pref.	—	—	—	—	—	—	—	—
Hebble Motor Services Limited	120,000 Ord.	15,000	2,250	45,000	6,750	—	—	—	—
Highland Transport Co. Ltd.	35,000 Ord.*	—	—	14,875	875	—	—	—	—
Lincolnshire Road Car Co. Ltd.	200,000 Ord.	63,929	6,393	15,985	1,599	—	—	—	—
Maidstone & District Motor Services Limited	750,000 Ord.	—	—	—	—	—	—	263,492	29,643
	200,000 6½% Cum. Pref.	—	—	—	—	—	—	—	—
Northern General Transport Co. Ltd.	831,081 Ord.	365,767	32,915	—	—	—	—	—	—
	300,000 6½% Cum. Pref.	—	—	—	—	—	—	—	—
North Western Road Car Co. Ltd.	750,000 Ord.	124,444	17,165	248,888	34,329	—	—	—	—
Ribble Motor Services Limited	1,200,000 Ord.	—	—	530,445	42,398	—	—	—	—
	200,000 6½% Cum. Pref.	—	—	—	—	—	—	—	—
Scottish Motor Traction Co. Ltd.	858,434 Ord.	214,609	29,601	214,608	36,547	—	—	—	—
	1,000,000 6½% Cum. Pref.	—	—	106,863		—	—	—	—
Southdown Motor Services Limited	750,000 Ord.	—	—	—	—	—	—	242,792	24,279
Southern National Omnibus Co. Ltd.	542,200 Ord.	—	—	—	—	—	—	271,100	22,436
Southern Vectis Omnibus Co. Ltd.	95,000 Ord.	—	—	—	—	—	—	47,500	5,241
	15,200 6% Cum. Pref.	—	—	—	—	—	—	15,000	900
Thames Valley Traction Co. Ltd.	250,000 Ord.	—	—	—	—	85,191	10,340	36,510	4,432
Trent Motor Traction Co. Ltd.	540,288 Ord.	75,147	6,561	150,293	13,126	—	—	—	—
United Automobile Services Limited	1,423,829 Ord.	698,257	89,454	—	—	—	—	—	—
	150,000 7% Cum. Pref.	39,622	—	—	—	—	—	—	—
Western National Omnibus Co. Ltd.	1,783,576 Ord.	—	—	—	—	891,788	110,104	—	—
	400,000 6% Cum. Pref.	—	—	—	—	400,000	—	—	—
Western Welsh Omnibus Co. Ltd.	406,000 Ord.	—	—	—	—	203,000	28,000	—	—
West Yorkshire Road Car Co. Ltd.	787,500 Ord.	195,843	24,697	195,843	24,698	—	—	—	—
	200,000 6½% Cum. Pref.	—	—	—	—	—	—	—	—
Wilts & Dorset Motor Services Limited	120,000 Ord.	—	—	—	—	—	—	30,724	4,423
Yorkshire Traction Co. Ltd.	350,000 Ord.	85,830	10,537	85,829	10,537	—	—	—	—
	24,350 7% Non-Cum. Pref.	4,661		4,662		—	—	—	—
Yorkshire Woollen District Transport Co. Ltd.	528,000 Ord.	88,000	10,958	176,000	21,916	—	—	—	—

* Highland Transport Co. Ltd., shares are 17s. each. The L.M.S.R. holds 17,500 ordinary shares

a large capital expenditure on their own cartage equipment. The four main-line companies own a fleet of 10,367 motors, 24,823 horse wagons and carts, and 4,928 miscellaneous vehicles, the capital value of which amounts to £4,306,198. Railway-owned horses used for transport number 11,163, and £2,693,203 is invested in garages, stables, and so forth. As an indication of the increasing mechanisation of railway cartage equipment, it is interesting to note that the companies' stock of horses at the end of last year was 1,579 less than at the end of 1937, while the number of motors advanced by 586 and miscellaneous vehicles by 836. For the most part, this road transport equipment is used in connection with the collection and delivery of rail-borne traffic. Although an essential part of the railway companies' business, the collection and delivery services inevitably show a financial loss by reason of the fact that the low level of railway rates allows little margin for cartage. Last year the G.W.R., L.N.E.R., and L.M.S.R. incurred a loss of £1,128,012 on these services, compared with £1,105,910 in the previous year. The Southern Railway is still in the fortunate position of being able to show a small profit, which amounted to £13,614 last year compared with £10,631 in 1937. The main-line railways are also responsible for a certain amount of throughout road transport, which forms the subject of a separate account in the annual returns, and the profit on this business last year amounted to £130,512 compared with £128,336 in 1937.

Northern Ireland Road Transport Board

THE recently-issued report of the Northern Ireland Road Transport Board for the year ended September 30, 1938, shows that the total revenue from passenger services amounted to £606,275, compared with £607,989 for the previous year. As to goods transport any comparison between the two years is regarded as fallacious. It was not until the main part of the acquisition of undertakings had been completed by July 31, 1937, that the management was in a position to take in hand seriously the organisation of the freight services throughout the province. This process has gone on throughout the year, with the result that costs have shown a steadily decreasing tendency. Evasion of the provisions of the Act with regard to carriage for hire went on with increasing tendency throughout the year. Nevertheless 716,827 tons of merchandise (including coal and other minerals) were conveyed by the board. In addition, 120,721 tons were carried under the head of railway collection and delivery, and 489,501 head of livestock were transported. This traffic was, however, not sufficient to keep the board's fleet occupied to full capacity, and steps have been taken to reduce the fleet and to ensure that the taxed vehicles shall be more fully occupied. Steps taken to achieve economies in operation are already showing appreciable results. For the year under review the operating loss was £76,206, and the total deficit was £169,527, after charging £147,399 for depreciation.

The Cost of Eliminating Level Crossings

Methods of apportioning the costs of level crossing elimination in various parts of the world. Increasing tendency to regard the work as primarily a road charge

WITH the increase in road traffic which has been a feature of every country in the world, the problem —and it is often a serious problem—of providing adequate means of protection where roads cross railways on the level has had to be closely studied. In Great Britain, the question of better protection at public level crossings is not of great urgency, as gates are compulsory on all main lines and these are generally interlocked with the railway signals. Any improvement must, therefore, be by way of the substitution of bridges for crossings, and grants have been made from time to time from the Road Fund to defray part of the cost of such works. The case for abolition, however, rests as much on considerations of convenience as of safety, since, under British conditions, railway level crossings are far from being the most dangerous points on roads. The position in Great Britain, which has only about 4,560 public level crossings, is, moreover, not nearly so serious as that in most other countries, where there is at least one such crossing for every mile of railway. The need for action is widely realised, and it is only the cost, and the question as to who is to bear the cost, which delays the application of comprehensive schemes of level-crossing elimination. It is the object of this article to show briefly how the problem has been tackled in a number of countries.

France

The cost of level-crossing elimination has always been shared between the railways and various other authorities, but the proportions borne by the different parties have not always been the same. The railway share has varied between the capitalisation of the amount saved through the elimination of the crossing (such savings being principally the crossing-keeper's wages) and double this amount. The remainder of the cost is covered by the local authority concerned and by the central government; and, in recent years, unemployment relief has played an important part. There is also one arrangement peculiar to France in connection with the financing of the cost of level-crossing elimination. The authority responsible for the work floats a loan and the interest and amortisation of this loan are met out of the proceeds of what are known as temporary local surtaxes. These surtaxes consist of small additions to the fares paid by all passengers proceeding to and from the station or stations in the district in which the level crossing is eliminated, and also small additions to all freight charges on traffic to and from that district.

Germany

The way in which cost has to be apportioned when work is carried out at a level crossing to improve safety is laid down in a law passed in 1930. Work at a level crossing to improve safety, covers, of course, replacement of such crossing by a bridge. When the work has to be carried out in order to meet the requirements of the railway, the cost has to be borne by the railway. Where the work is desired on account of the needs of road transport, the authority which constructed the road has to cover the cost. In both cases, however, the party which did not ask for the work to be done is called upon to contribute to the cost a sum equal to the financial benefits derived from such work. For example, where a crossing is eliminated to meet the needs of increased road traffic, the railway would be required to contribute an amount equal to the capitalised value of the crossing-keeper's wages. Where work is desired by both parties, the cost is shared equally. In the event of disagreement as to the

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apportionment of the cost, the Minister of Transport for Germany has to decide its allocation.

Switzerland

There is no precise enactment as to the apportionment of the costs of level-crossing elimination, the law stating that railways must take such measures as are necessary, either at the time of their construction or subsequently, to ensure public safety. The growing importance of road traffic has, in practice, brought about certain modifications, it being considered unreasonable to compel railways to bear the whole cost of level-crossing elimination when such works are needed solely to benefit road transport. The cost, therefore, is now borne wholly by the railway only when replacement of a level crossing by a bridge is desired by the railway administration for its own convenience. If a level crossing is eliminated at the request of a local authority solely in the interest of road improvement, the railway will only carry out the necessary work if the cost involved does not exceed a sum equivalent to an amount representing the capitalisation of the current expenditure on account of crossing-keeper's wages and other similar items. In recent years there has been a considerable amount of level-crossing elimination in Switzerland carried out in connection with unemployment schemes and, consequently, much of the cost has been borne by authorities other than the railways.

Canada

Since 1909 there has been in existence a Railway Grade Crossing Fund for the purpose of assisting the provision of additional safety appliances at level crossings or for contributing towards their elimination. Grants may be made from the fund up to 40 per cent. of the total cost of the works in respect of any one crossing, subject to a maximum grant per crossing of $100,000. The Railway Grade Crossing Fund was created by a Canadian Act of Parliament passed in 1909. A sum of $200,000 was to be paid into it every year from the Consolidated Revenue Fund of Canada. The money from this fund was to be devoted wholly to actual construction work and was in no way to be used to cover any operating or maintenance costs; there was a limitation for each crossing of 20 per cent. of the total cost and no individual item was to exceed $5,000. Money could also be paid into the Grade Crossing Fund by the Provincial Governments. Various changes have since been made in the provisions governing the administration of the fund, and in particular the maximum permissible grant for one crossing has been raised, this now standing at 40 per cent. of the total cost, or $100,000, whichever is the less. From its creation until 1927, roughly $844,000 had been spent from the fund, or nearly 14 per cent. of the total expenditure in that period on level crossings, and the balance was covered to the extent of 40 per cent. by municipalities and 46 per cent. by the railways. Subsequently, the rate of expenditure from the fund increased as additional resources were made available to it by the Canadian Government, such as a grant in 1930 of $500,000 from its unemployment relief fund. Much of the expenditure has been in respect of improved protection in the form of barriers or electric warning devices, but actual crossing elimination has also had a prominent place in the uses to which the fund has been put; up till 1934, for example, approximately 300 crossings had been closed or diverted, and 90 overbridges and about 120 underbridges had been built with the aid of grants from the fund.

United States of America

Until a few years ago, the normal practice in the United States was for 50 per cent. of the cost of level-crossing elimination to be borne by the railway concerned, 25 per cent. by the local authority, and 25 per cent. by the State. Recently in some States the share of the local authorities has been reduced, as in the case of New York State, to as little as 1 per cent. The great growth of road traffic in recent years has been considered to make this arrangement unfair to the railways and there is a tendency for an increased amount of the cost to be borne by authorities other than the railway. A desire to provide work for the unemployed has also played its part in making grants available for level-crossing elimination. In 1935, there was a legal case in one of the Southern States, in which the judgment was of considerable importance to the railways. It was held that a railway need not necessarily be compelled to defray half the cost of the elimination of a crossing. In the particular case in question, the railway had contended that such a requirement was "arbitrary and unreasonable." The road was part of an important through route and was maintained partly out of Federal, as distinct from State, funds. The railway had ceased to be the main cause of danger and in fact could claim protection from dangers caused by the movement of motor vehicles on the road. During the past few years, large sums have been spent on level-crossing elimination, partly from Federal funds raised for the purpose of reducing unemployment. In some cases virtually the whole cost has been borne in this way, and the shares of the local authority and of the railway have been nominal. A £40 million Federal programme was introduced in 1935, comprising the abolition of nearly 2,000 crossings and improved protection at many others. Further sums were voted subsequently. The latest development has been the passing of an amendment to the constitution of New York State, whereby the legal liability of the railways to contribute 50 per cent. of the cost of level-crossing elimination was reduced to a maximum of 15 per cent. Under this amendment, the share of the railway in the cost of any crossing elimination begun after the end of 1938 will be the amount of the net benefit to the railway, subject always to the maximum already quoted. As the State of New York is very active in regard to crossing elimination, the saving in expense to the railways should be considerable.

South Africa

There can be few countries where a larger proportion of the cost of crossing elimination is borne by the railway than in South Africa. The cost was originally shared equally by the railway and the local authority. The railway proportion was later increased to 60 per cent. and, in the case of local authorities with limited financial resources, the railway contributes as much as 80 per cent. As a further measure of assistance, the railway will also advance the local authority's share of the cost; repayment may be made by instalments over a period of 20 years, and interest charged at the rate of 3½ per cent. The South African Railways are, of course, State owned, and the very liberal participation of the railway administration can be regarded as a form of State assistance. Owing to the profitable results of the railway working in recent years, this assistance is in fact given without giving rise to any charge on the national budget.

New Zealand

Until fairly recently, the bulk of the cost of eliminating level crossings has been borne by the Government Railway Department. An agreement reached in 1935 provided that the cost was to be shared between the Railway Department, the main Highway Board, and the Unemployment Board, while provision was made for assistance from local authorities.

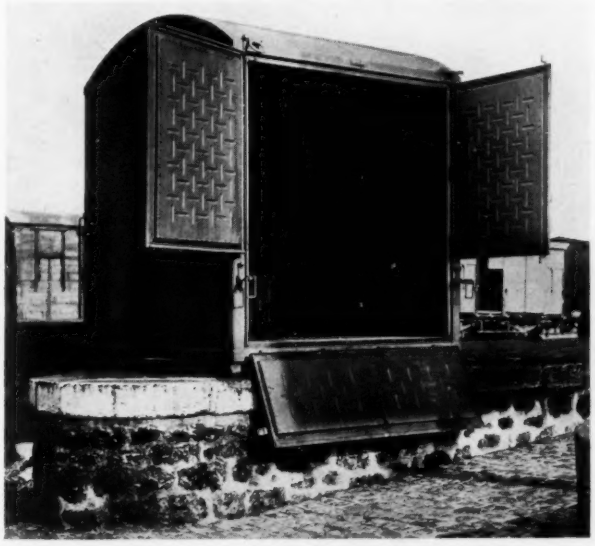
Containers in France

Various sizes and types of container are now available, as is special equipment for handling, also several interesting patterns of trailer and combined container trailer

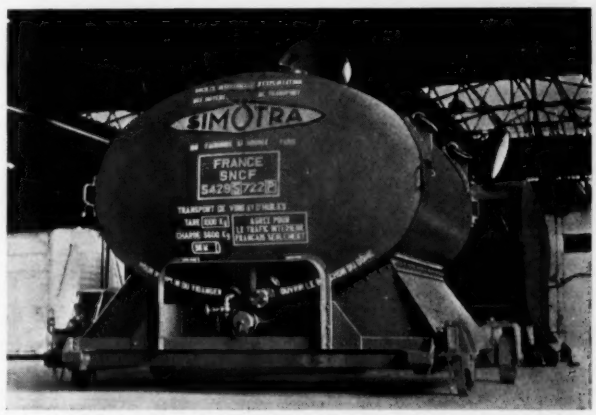
TO encourage the use of containers for door-to-door traffic the National Railways Company (S.N.C.F.) has introduced some standard types, which are placed at the disposal of transporters at the departure station on giving 24 hr. notice. There are three types of small containers, with capacities of 1, 2, and 3 cu. m.; the respective tares are 270, 325, and 350 kg., and the maximum loads 1,230, 1,175, and 1,150 kg. All of them have movable side panels in three sections, and they are mounted on four small wheels, two of which are on a pivotal front axle. To anchor the container in position for loading or unloading two side skids are provided. The container is lifted on to the skids by lowering a lever fixed at the front, and, inversely, by lifting the lever it is raised on to the wheels. Rings are fitted for handling the containers by means of cranes.

Containers may be hired for a single journey or by the month or year. For a single journey the hire is 10 per cent. of the freight charge; the price for a month is fr. 60 and fr. 600 for the year. Transport of goods is charged on the net weight, according to the general or special tariffs. Containers used for a single journey must be returned to the station of destination, and there is no charge for the return of empties. When, however, the container is owned or hired for a period by the consigner, the return empty is charged at the rate of fr. 5 for 200 km., fr. 10·75 for 500 km., and fr. 15 for 1,000 km., by slow goods train. For fast goods the respective rates are fr. 7·75, fr. 15, and fr. 19·50.

Large containers of the S.N.C.F. have capacities of from 4 to 16 cu. m., and are of either open or closed types according to the class of goods to be transported. Open containers have folding sides to economise in space when returned as empties. They comprise two types, of 4 cu. m. and 6 cu. m. capacities, with tares of 600 and 700 kg. and maximum loads of 4,400 and 4,200 kg. Closed



Standard S.N.C.F. 8-cu. m. container, with maximum load capacity of 4,100 kg.



Simotra tank container on dismountable steel frame having four small wheels; it is lined with enamel for carrying wine or oil

containers are of four types, with 4, 8, 12, and 16 cu. m. capacities, tares of 500, 900, 1,100, and 1,300 kg., and respective maximum loads of 2,000, 4,100, 3,900, and 3,700 kg. These containers are constructed of metal with wooden floors. Apart from the containers belonging to the railways, the S.N.C.F. accepts containers adapted for the carriage of special goods. These include tanks for the transport of liquids and refrigerator containers for perishables.

Large containers are hired on conditions similar to those for the small. Notice of 24 hr. must be given at the departure station and the empties must be returned to the destination station. The hire for a single journey is 5 per cent. of the transport charge. When hired by the month the rate varies from fr. 60 to fr. 200, and by the year from fr. 600 to fr. 2,000. The freight rates are charged on the net weights. There is no charge for return empties when company containers are hired for the single journey.

Containers owned by consigners or hired for periods are charged as empties: (*a*) fr. 11·25, fr. 15·75, and fr. 24·50 for capacities of 6, 10, and 16 cu. m. for a distance of 200 km.; (*b*) fr. 23·75, fr. 34, and fr. 55 for 500 km.; and (*c*) fr. 32·50, fr. 46·50, and fr. 73 for 1,000 km. By fast goods the rates are 25 to 50 per cent. more, according to distance. A reduction of 50 per cent. is allowed for folded containers. No charge is made for cranes used in handling the containers at stations.

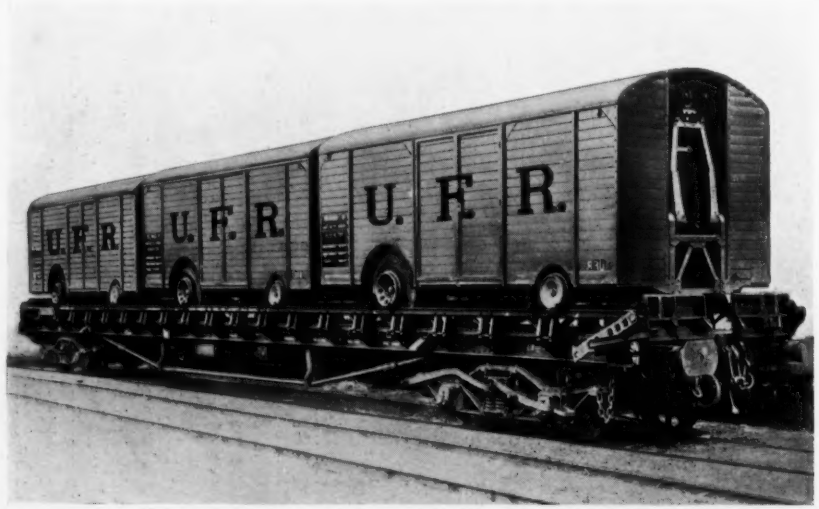
Tank containers are available on the S.N.C.F. lines for transport of liquids for door-to-door delivery. As the transport costs are payable on the net weight of the liquid, and the charge for the return of empties is small, the use of these containers effects considerable economies. Tanks enamelled inside and suitable for the transport of wine, cider, alcohol, and oil are in common use. Special containers are also available for the transport of liquids under pressure or kept at definite temperatures by the use of insulating materials. These containers may be hired from firms specialising in their construction, such as the Société Industrielle d'Exploitation des Moyens de Transports

The Autocadre (Système Henry) lorry equipment for hoisting or lowering large containers or tanks from or to the ground

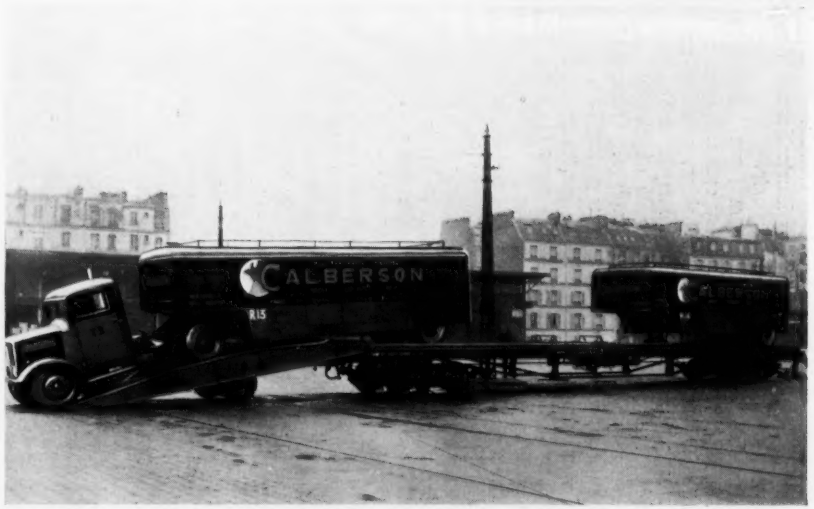
The Sulky 5-ton container fitted with the Crescent wheel arrangement, suitable for short distances by road

Huet-Fives-Lille type of low chassis trailer fitted with Crescent wheels carrying an 8 cu. m. container

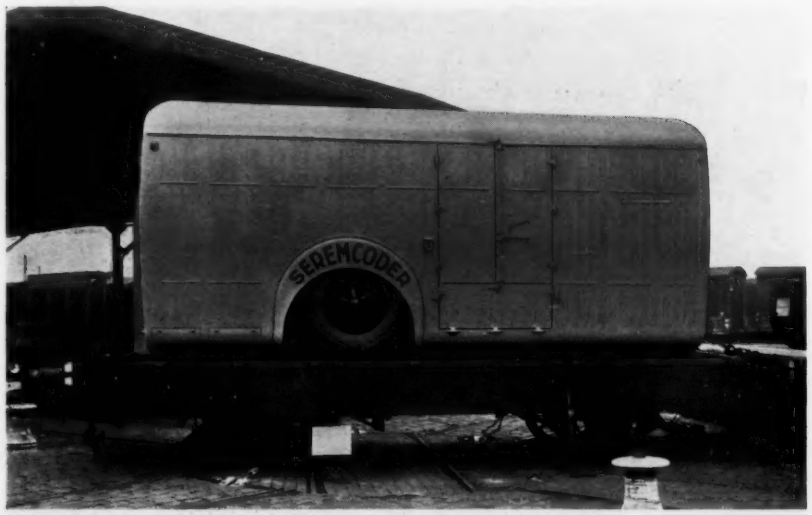
Crescent-Perrin-Fives-Lille trailer convertible into an inclined plane for loading large containers from the ground, or vice versa



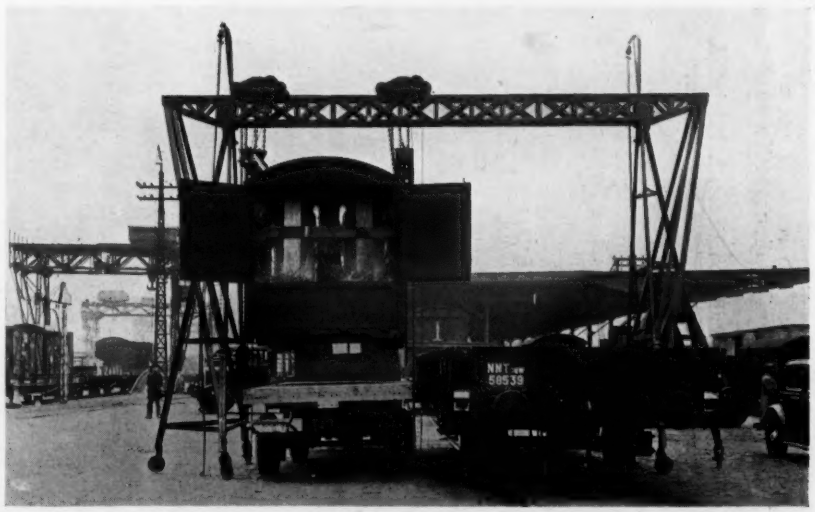
Union des Transports Ferroviaires et Routier containers loaded on bogie truck : note auxiliary flanged wheels resting on longitudinal truck rails



Maquard trailer equipment in use ; container being unloaded from bogie truck by ramp attached to latter by special coupling



Seremcoder trailer lowered between road wheels for conveyance with stability on truck, and enabling full use of loading gauge to be made



Diard portable gantry crane for transfer of large containers from road to rail and vice versa : note castor-type wheels of tripods

Simotra, 166, rue du Faubourg-Saint-Honoré, Paris. These Simotra tanks may be rendered portable in a few minutes by means of a dismountable steel frame running on four small wheels.

To aid in handling small containers, a Belgian device consisting of an inclined plane, about 13 ft. long and 1½ ft. wide, made of welded parts, is used. Each truck is provided with a couple of these inclined planes, and a drum for hauling up the container in loading or in braking the descent in unloading. For handling large containers oil-electric cranes are in use at the principal stations of the S.N.C.F. The standard type is the Petroleo Electric built by the Ateliers de Constructions de Jeumont. Each crane is mounted on a chassis 13 ft. long, and can hoist 6 tons to a height of 20 ft.; a small auxiliary crane is fitted to the same chassis.

Flat lorries fitted with a special equipment known as the Autocadre A.H. (Système Henry) may be used for hoisting large containers and tanks from the ground or *vice versa*. Two guide rails on the lorry have hinged extensions sloping toward tubular supports set on the ground or on a rail wagon. Two light metal frames with small guide wheels are attached on opposite sides of the container. The container, when in motion, is suspended from these frames by adjustable rods attached to its four bottom corners. Due to the automatic adjustment of the guide wheels the container is always held in a vertical position. The container is hauled up or down by means of steel wires on a drum actuated by the lorry motor, under easy control by the driver.

A device for converting large containers into a kind of road vehicle is known as the Sulky Crescent. Inset spaces on opposite faces of the container are fitted with metal frames to receive two wheels with pneumatic tyres. The wheel hubs are attached to a strong metal slide an hydraulic jack lifts the container clear of the ground. For short distances by road, shafts are fixed to the front, and the container may then be hauled by a horse for several miles in the country. The name "sulky" is due to the resemblance to the sulky used in trotting races, in which the wheels are attached to the shafts. For longer distances a tractor may replace the horse.

For journeys of, say, 20 miles or more at greater speeds, the same system of Crescent wheels may be used to convert the container into a trailer, known as the Huet-Fives-Lille. A low chassis is run under the container, and the movable wheels are fixed to the rear end. The chassis and container are then raised by the hydraulic jacks; the front end is lifted by hydraulic means and coupled to the tractor (mechanical horse). All the Crescent types of equipment for handling and transporting containers are supplied by the Société T.E.M.M.I., 134, Boulevard Haussmann, Paris. This series also comprises a trailer in the form of a flat lorry convertible into an inclined plane for hauling up large containers from the ground or lowering them. It can carry loads of six tons at speeds up to 40 m.p.h. By means of a winch the rear road wheels, sliding along guides, may be shifted to the front of the lorry; the rear is then lowered to the ground. The container, fitted with movable wheels, is then hauled up the inclined plane by an electrically-operated drum. Telescopic jacks are used to raise the lorry floor so that the wheels may be slid back and securely bolted in their normal position.

Exhibition of Containers

All kinds of containers and handling devices used in France, as well as road-rail trucks and vans were recently on view at the Batignolles goods station, Paris. Our French contemporary, *Transports*, has issued a special illustrated number describing the exhibits at length, and giving numerous interesting technical details. Permission to use some of the accompanying illustrations is due to the courtesy of the Editor of *Transports*.

For transfer of heavy containers from lorry to rail wagon, a light portable steel gantry crane, known as the *Pont Diard*, was shown. The bridge, running on six small wheels, stands astride both lorry and rail wagon. The lifting tackle comprises a couple of blocks running on the bridge and suspended chain pulleys. Other exhibits comprised Fenwick manual and electric elevators.

Road trucks and trailers suitable for transport by rail, shown at Batignolles, comprise four types: (1) The U.F.R. (Union des Transports Ferroviaires et Routiers) equipment consists of a trailer van, tractor, rail wagon, and loading wagon. The trailer has a tare weight of a little more than 3 tons and carries a load of 6 tons with a volume of 24 cu. m. The tractor coupling, which is hinged, can be raised and inset in a recess in the van end. Attached to the road wheels are auxiliary flanged wheels to run on rails, and there is also a pair of somewhat similar small flanged wheels near the front of the trailer. On the rail wagon are fixed two rails, the gauge of which corresponds to that of the flanged wheels of the trailer. The rail wagon is 18 m. (59 ft.) long and can carry three trailers of 6 tons or five of 3½ tons capacity. The loading wagons are of two forms, for side or end loading.

(2) The Maquard trailer equipment, used by the Société Calberson, comprises a trailer, a ramp, a railway wagon, and tractor. The trailer has a cubic capacity of 30 cu. m. and carries a load of 8 tons. The ramp runs on a pair of wheels and is attached to the railway wagon by a special coupling. The ramp is easily manipulated by one man. On the rail wagon, the trailer is anchored by means of metal skids.

(3) The Seremcoder trailer is designed for use on any flat rail wagon without special conversion. It permits the full use of the railway loading gauge. Loading or unloading can be effected at any station having platforms provided with a turntable. Any type of tractor can be utilised. The Seremcoder trailer is a vehicle of 32 cu. m. capacity and it can carry a load of 7½ tons; it has a tare weight of 3 tons. The trailer can be easily adjusted in position on the wagon. By a system of drums, the body of the trailer can be lowered between the road wheels until it rests on the floor of the wagon, and it is thus more stable and rigidly resting on the truck frame. This system economises space in comparison with ordinary vehicles resting on wheels. The Etablissements Coder has also designed similar trailers adapted to the transport of large S.N.C.F. containers and tanks.

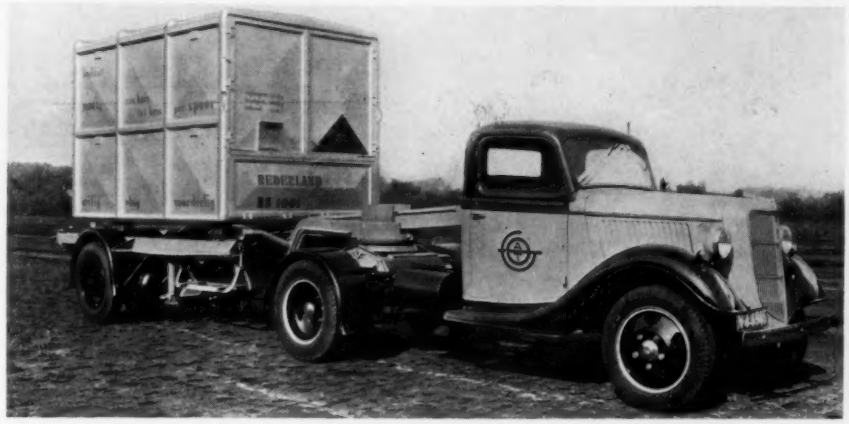
(4) A Renault truck with a loading capacity of 4½ tons and a dead weight of 5 tons was also on view. It is held in place on the rail wagon by adjustable wires attached to the truck and to the buffers, and by a device preventing any shifting due to possible deflation of the pneumatic tyres. The only vehicle shown at Batignolles capable of running either on rails or on the road, was the Willème-Coder. This wagon may be utilised in the make-up of any goods train, and, coupled to a tractor, can be run on the road. It is particularly useful for industrial works which have no railway sidings.

Transport of railway wagons on the roads, a French idea which has been greatly developed in recent years by the German railways, is now being utilised by the Société des Etablissements J. J. Carnaud et Forges de Basse-Indre in its works at Périgueux. This firm has imported a trailer of the latest German type. The rail wagon is run directly from a siding end-on to the low trailer, comprising two bogies. It can then be hauled to the works by a tractor.

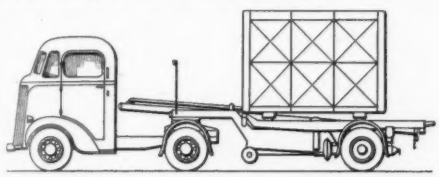
Handling Containers on the Netherlands Railways

A new system of conveying containers between the railway wagon and the traders' premises, designed to give easy and quick service

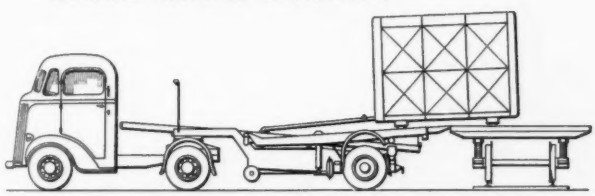
FOR some considerable time the management of the Netherlands Railways has been endeavouring to satisfy its clients' wishes for flexible and efficient door-to-door transport methods by the adoption of containers. The administration has not found the ordinary container system, now fairly widely used, to give all the facilities desired, one of the difficulties being that many clients do not possess cranes or lifting tackle able to handle the loading and unloading at their premises. The transport of railway wagons by road on special vehicles, as seen in Germany, and the use of "road-railer" vehicles, were both subject to serious disadvantages, including unnecessary obstruction of the streets and uneconomic waiting time. To meet these difficulties the mechanical engineering staff has designed, in conjunction with the van Doorne trailer wagon works at Eindhoven, a new method of transporting and handling containers, which was recently demonstrated at The Hague and is of considerable interest.



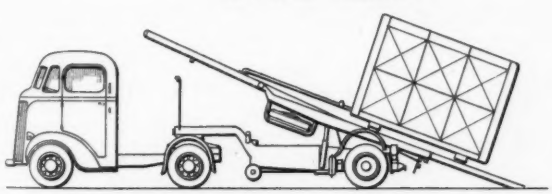
Container loaded on special road trailer conveyor with tractor attached



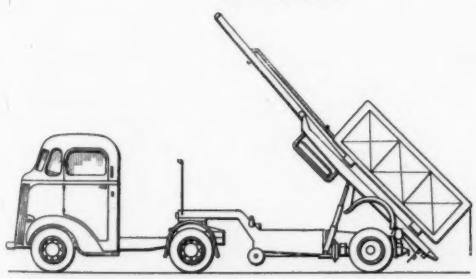
NORMAL RUNNING CONDITION



TRANSFER OF CONTAINER TO OR FROM RAILWAY WAGON



SETTING DOWN OR TAKING UP CONTAINER



TIPPING OUT FROM CONTAINER

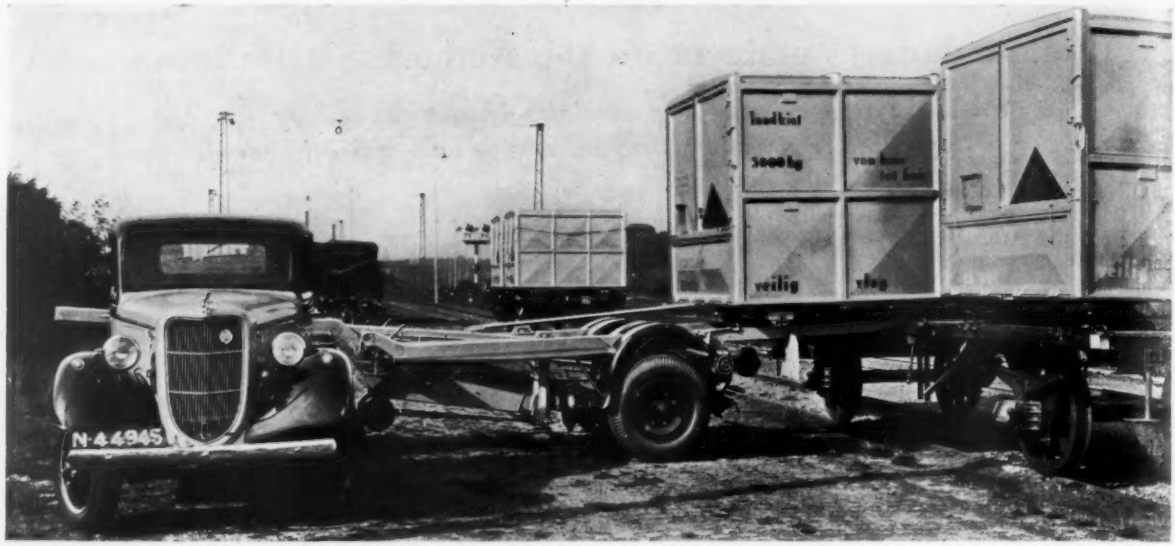
The Container

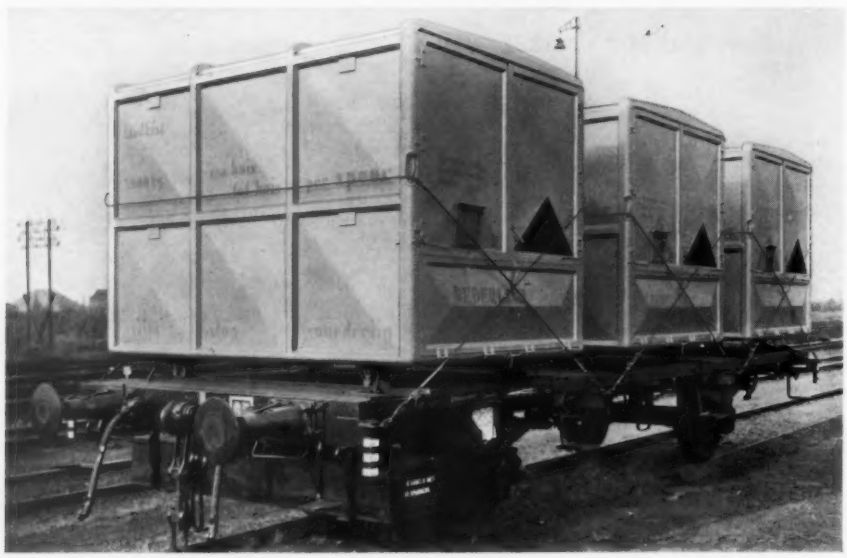
This is of all-steel welded construction measuring 3 m. (9 ft. 10 in.) long, 2 m. (6 ft. 7 in.) wide, and 1·98 m. (6 ft. 6 in.) high inside, with double doors and flap at each end, ventilation openings, and four rollers on underbrackets. The tare weight is 856 kg. (1,887 lb.), and the load taken 5 *tonnes*. Containers are carried by rail on express goods trains, usually by night, in accordance with the much-advertised phrase "received in the evening, delivered the next morning"; they travel up to three at a time on special container trucks, on which they are arranged transversally to the track.

The container trucks have been converted from surplus cattle wagons and have three pairs of rails formed of channel section irons, in which the container rollers run, fitted with movable locking steps on each side of the trucks to keep the rollers in place. The container bodies are secured to the truck by ropes and tension hooks, with adjustable turnbuckles.

The Tractor and Conveyor

The distinguishing feature of the new system is that the containers are taken from the railway truck, conveyed to the consignee's premises and set down there, or *vice versa*, by means of a special vehicle, attached to and hauled by a 75-h.p. Ford tractor, equipped with raising and lowering gear worked by power provided by the tractor engine. This obviates the use of cranes at stations and waiting of the road vehicle at premises where no cranes are available while arrangements are made to unload the containers. The tractor can easily be uncoupled from the trailer conveyor and be used to haul another one, should this be necessary. One tractor can serve several conveyors in certain circumstances, or be used for other pur-





Above : Container being hauled off railway truck on to channels of trailer conveyor extended to form a bridge between the two vehicles, and subsequently retractable

Left : Three containers loaded on special container truck : note the container rollers resting in pairs of transverse channels on truck

Below : Container being unloaded from road trailer conveyor down channel rails, again extended for this purpose, but at an inclined angle to meet the ground

poses. Only a few minutes are required to pass a container from the railway truck to the conveyor, or the reverse.

There are two telescoping channel rails, similar to those on the truck, which can be extended from the rear of the conveyor to reach the truck and form a bridge for the container to pass over. A push-and-pull rod, operated by power and working between the running rails, is attached to the container for this purpose. As soon as the container is loaded on the conveyor the telescoping rails are brought in and the carrying frame secured in the running position; the tractor then hauls the load to the required destination where the rails are again extended as necessary and the container lowered down by inclining the frame and using the push-and-pull rod. The frame can be set at a steep angle to tip the contents of a container out through the end flap doors, with consignments for which that method of unloading is satisfactory and desired.

The power for the various operations is derived from an hydraulic pump and transmitted through a special clutch in the coupling between the tractor and conveyor; the drive is controlled by a regulator handle at the side of the carrying and lifting frame. Combined with the regulator is a gauge indicating the weight of the container and thus checking whether the sender has stowed more weight therein than is permissible or has been agreed on for the particular consignment. The mechanism is easily managed by one man, a further advantage over any existing methods. The lights and vacuum brake apparatus on the trailer conveyor are connected through couplings which are made up automatically when the ordinary coupling is attached to the tractor, as is also the power drive connection.

Unloading time from road vehicle to ground level or to rail wagon is about 8 min.; for the reverse operation about 10 min. Few stations possess cranes, and the new method of handling containers is expected to increase their use in home traffic. At present the new road vehicle is not adapted for carrying foreign containers, but a special undercarriage on four small wheels may be designed for use with those arriving on the Netherlands lines. The cost is given as fl. 500 (£57) per container and fl. 7,500 (£850) for tractor and trailer. It is expected that the new method will lead to a considerable increase in door-to-door transport in the Netherlands. Haulage by road is in the hands of the A.T.O. motor transport concern, which works with the railways.

Publications Received

Control of Road Transport in Great Britain. By Gleeson E. Robinson, M.C., LL.D. London: Modern Transport Publishing Co. Ltd., Norman House, 105-109, Strand, W.C.2. 7¼ in. × 4¾ in. 48 pp. Price 1s. net.—The origin of this brochure is to be found in a lecture given to the London School of Economics by Mr. Gleeson Robinson, the Traffic Commissioner for the Metropolitan Area. Time did not permit of the lecture being delivered in full, but Sir Lynden Macassey, K.B.E., Past-President of the Institute of Transport, who contributes a foreword to the present brochure, explains that he was strongly of the opinion that the lecture in its entirety ought to be published. Accordingly *Modern Transport* was approached and undertook the work. The full text appeared serially in the columns of that paper and is now reprinted in more permanent reference form. Despite the small compass, these 48 pages succeed in including a succinct, impartial, and accurate summary of road transport legislation from an author who has both extensive theoretical knowledge of the subject and also wide practical experience.

The Story of the Road: From the Beginning to the Present Day. By J. W. Gregory. Revised and enlarged by C. J. Gregory. London: Adam & Charles Black Limited, 4-6, Soho Square, W.1. 8¾ in. × 5½ in. × 1¼ in. 306 pp., illustrated. Price 7s. 6d.—The late Professor Gregory's book was first published in October, 1931, by Alexander Maclehose & Company, and was reprinted in December of the same year. The author died in 1932, and it is his son who has undertaken the revision of the volume and the inclusion of details of the great developments that have taken place in road making during the past decade. The book is divided into two sections, respectively "ancient and mediaeval roads," and "the evolution of the modern road," and these sections are really deserving of entirely separate reviews. The first section merits unstinted praise for its scholarly, interesting, and adequately documented account of man's earliest known efforts to improve his land communications. In one or two cases the author's deductions are open to criticism, but in every case he supplies the facts and thus enables the logical reader to form his own conclusions in the light of the available evidence. This section is a magnificent treatise from the pen of an historian who reveals time and again a lifelong love for his subject. Our one regret is that in the present edition two fine folding plates showing Roman roads have been omitted.

In its original form Section II suffered from the fact that the author was considerably less well informed on this part of his subject. Naturally it is this part that has been subjected to revision and also to bringing up to date. Popular information is included about the new roads of Germany and the United States, and this justifies the change in the sub-title, "From the Beginning down to A.D. 1931," to "From the Beginning to the Present Day." Nevertheless, the modern information is essentially popular and general, designed for the non-technical reader. As an historical volume "The Story of the Road" is a notable work, but it cannot be regarded as contributing to our store of knowledge on modern road construction.

Suppressing Radio Interference.—The British Standards Institution has issued B.S. No. 827-1939, dealing with equipment required to maintain within the prescribed limits the electric field set up by tramcars, trolleybuses, and their overhead supply systems. This field, if unrestricted in its intensity, is capable of causing interference with radio receiving sets. This interference takes different forms according to the part of the electrical equipment responsible for it, and these various manifestations are defined in the specification. The booklet and its appendices form, indeed, more than a formal specification, being a guide to the identification of sources of interference and the means of suppressing them.

Commercial Vehicle Shock Absorbers.—A new design of piston-type shock absorber, specially constructed for heavy duty on commercial vehicles, forms the subject of a folder issued by C.A.V.-BOSCH Limited, Acton, W.3. This shock absorber embodies several new features designed to make it a highly efficient accessory necessitating the minimum of expenditure on maintenance during service. It is intended to damp any excessive road spring movement, without detracting from the value of the spring as a cushion, and works on the principle of fluid friction. Two pistons are incorporated and are either double acting or differential. The double acting type has valves of equal setting which, fitted to each piston, offer equal resistance to the compression of the road spring as to the recoil; the differential type incorporates valves of unequal value, and less resistance is offered to the compression of the road spring than to the recoil. The operation of the absorber is simple but positive. Any movement in the vehicle axle causes rotation of the rocker shaft through a connecting link and lever; the rocker, mounted on teeth between its bearings, converts the rotary motion of the shaft to the reciprocating motion of the pistons. Each piston has fitted to its outer ends a circular valve plate, which, in turn, carries on its inner seating a pressure valve, operating at a pre-determined maximum resistance, and on its outer seating a recuperating plate. Resistance at slow vehicle speeds may be varied, without alteration to the resistance at high speeds, by means of a meter pin of a pre-determined size located in a hole in the piston wall. This makes the complete shock absorber an adjustable unit to suit individual suspension.

XUM

Overseas Notes

Fewer Lorries and Vans on French Roads

As a result of administrative and fiscal measures restricting road transport, the number of motor lorries and vans in use on French roads is diminishing. Estimates made by the *Argus de l'Automobile* show that these vehicles in 1938 totalled 450,000 units, against 458,000 in 1933. Old trucks are not being replaced by new vehicles in such large numbers as formerly. One manufacturer noted that 3,000 trucks built in 1917 are still running. Out of the present total of 450,000, only 116,000 are less than five years old.

Kingsbridge Station (Dublin) Bus Connection

Kingsbridge station is situated on the south side of the River Liffey, about 1½ miles from O'Connell Bridge, Dublin. Buses and trams to and from O'Connell Bridge pass Kingsbridge, but run along the north side of the river. Passengers arriving at or departing from the G.S.R. terminus have, therefore, to walk about 200 yd. over the bridge spanning the river. For their greater convenience a bus service has now been arranged between O'Connell Bridge and the departure platform at Kingsbridge station for those travelling to the country, and from the arrival platform to the city for those arriving by train. Incidentally, the tram service has been greatly reduced on this line and supplemented by a double-deck bus service; the trams continue to run from O'Connell Bridge to and from Lucan, but are not intended to cater for the full local traffic between O'Connell Bridge and Phœnix Park.

Buses of the Royal Hungarian State Railways in Budapest. Before the recent territorial changes there were 4,557 km. (2,832 miles) of bus route in Hungary

Nigerian Railway Road Feeder Services

According to the annual report of the Nigerian Government Railways for the year 1937-38, the road feeder services worked by the railway administration, which are confined to the Northern Provinces, are operated by 3½-ton, 2-ton, and 1½-ton lorries. The vehicles in service numbered 29, with 28 trailers, and the latest additions to the fleet have diesel engines. The total vehicle mileage in the year was 326,600; receipts were £19,140, and expenses £16,047. There was a considerable decrease in traffic, the number of passengers falling to 2,657 from 4,701 in 1936-37, and goods tonnage from 30,955 to 16,642 tons. A decline in trade conditions, especially in export cotton, together with the poor ground nut crop, affected receipts, while the competition of private lorries contributed to the decrease of over £7,000 in revenue. Two new Bedford 2-ton lorries and six 3½-ton Foden lorries and trailers were put in service during the year as replacements. The latter vehicles are propelled by Dorman diesel engines of a type similar to that which has given satisfactory service in the past on the 2-ton Albion lorry.

Reichsbahn Road Services in 1938

Passenger traffic on the bus lines of the Reichsbahn (which were extended in 1938 from 60 to 86 services) rose during the year by 85 per cent., consisting mainly of workers to new industrial districts. In Austria 88 bus lines were in operation. The motor lorry traffic of the railways has also been extended; in many instances the system of conveying motor trailers by rail has been introduced. In the latter part of 1938 there were heavy demands upon railway wagon stock of the Reichsbahn owing to the movement of troops and the construction of fortifications in Western Germany (the latter work at times needing 8,000 wagons a day), reorganisation in Austria, and additional transport requirements in Sudetenland. Some alleviation was achieved by the greater use of motor transport.

Road Transport in Norway

The Norwegian State Railways have not extended their road motor transport (which covers about 471 km.) during the past two years. They have, however, established rail connection with a number of new private road services. The number of registered motor vehicles in Norway increased between 1935 and 1937 by rather more than 30 per cent. The total number of road motor vehicles in service on December 31, 1937, was 95,529. This figure included 7,147 public vehicles (of which 2,633 were taxicabs and 2,153 were buses) and 72,510 private vehicles (of which 43,030 were motorcars and 26,331 were lorries), with 12,660 motor cycles. Great importance is attached to a rapid development of the road system, both as a means to provide employment and in order to improve internal communications. The foregoing information is contained in the Report on Commercial Conditions in Norway, issued by the Department of Overseas Trade (H.M. Stationery Office, 2s. net).

By Road to the Arctic Ocean

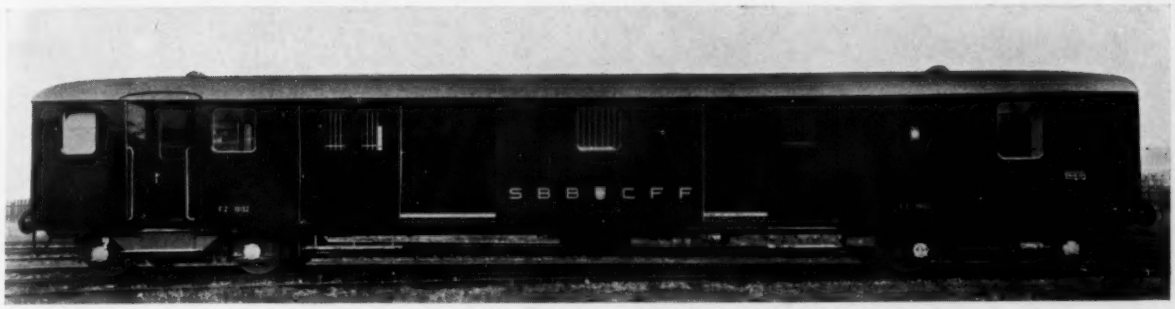
Due to the enterprise of the Finnish Government in building the only highway in the world that reaches the waters of the Arctic Ocean, it is possible to travel by regular passenger services to Liinahamari, the northernmost port in the world. Moreover, traffic along this road is maintained all the year round. The shortest distance by motorcar between Helsinki and Liinahamari, is about 950 miles. The Arctic highway proper begins at Rovaniemi, a town just below the Arctic Circle, and from there it is 330 miles to Liinahamari. There is regular train service between Helsinki and Rovaniemi, and a bus service between Rovaniemi and Liinahamari.

Railway Road Services in Japan

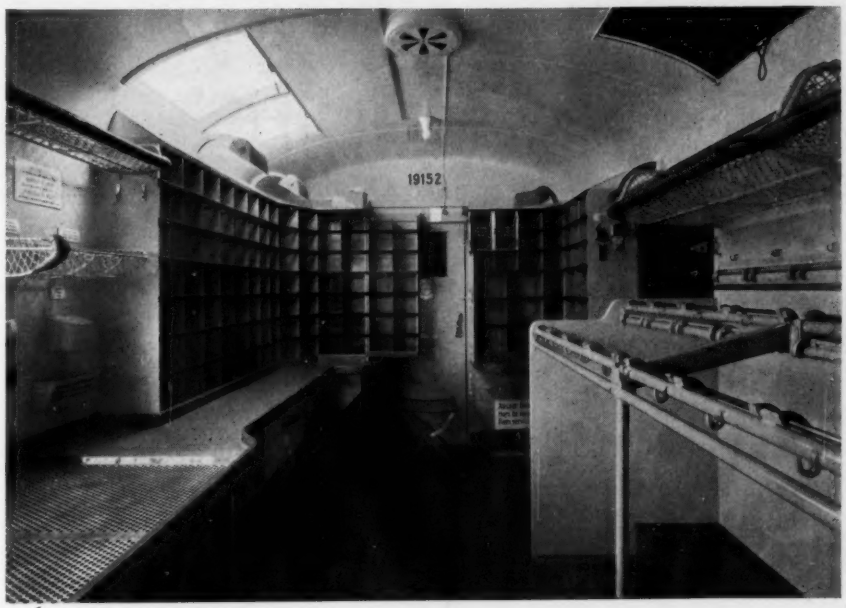
The road motor services operated by the Japanese Government Railways were 37 in number, working over an aggregate length of 1,980 km. according to the annual report for the financial year ended March 31, 1937. During the year, 8,944,321 passengers and 73,724 metric tons of goods were carried, producing respectively earnings of 2,074,170 yen, and 209,455 yen. This represents an increase of over 50 per cent. on the traffic of the preceding year. Apart from the State Railway-operated road services, there were 23,630 motorbuses and 624 motor trucks in operation on private routes at the end of the financial year.

SWISS LIGHTWEIGHT MAIL AND LUGGAGE VANS

These vehicles have been built specially to complete the lightweight limited express rakes of the Swiss Federal Railways, and to replace six-wheel vans of inferior running qualities and appearance



Above: Exterior view of one of the new lightweight bogie mail and luggage vans, Swiss Federal Railways



Right: Interior of well equipped and lighted mail sorting compartment

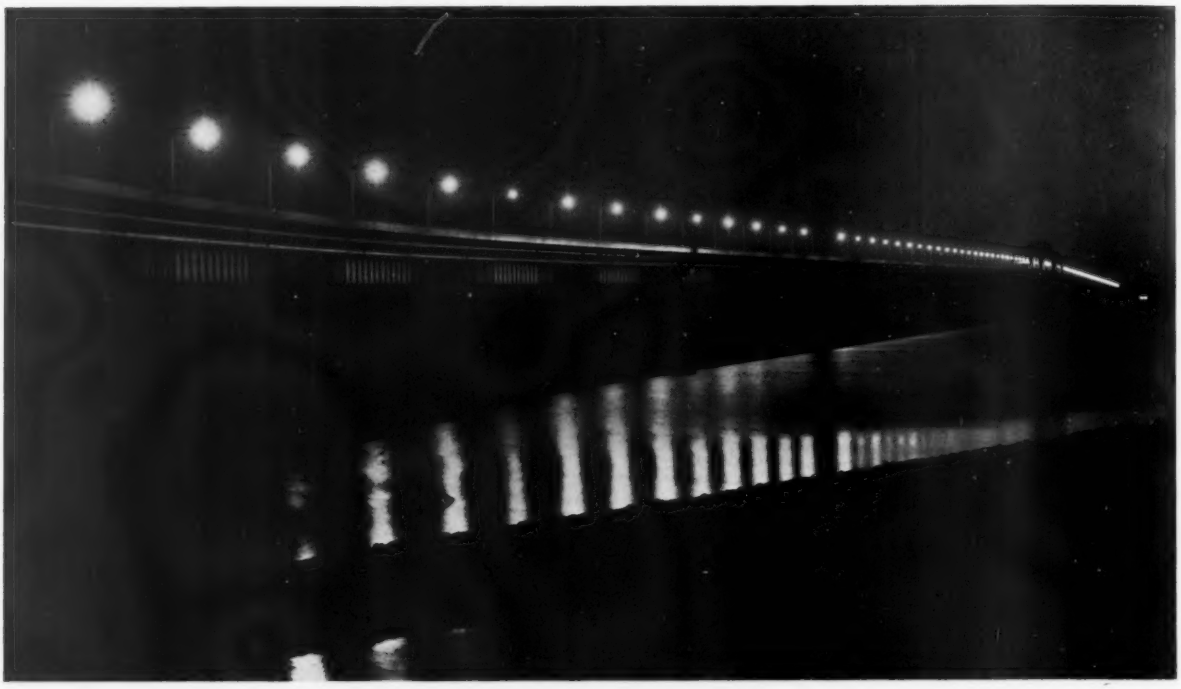
THE lightweight steel coaches and buffet cars built for and comprising the standard composition of the Geneva—Zurich and Lausanne—Basle limited high-speed electric trains since the summer of 1937, were described and illustrated in issues of THE RAILWAY GAZETTE dated April 30, June 25, and August 13, 1937.

Hitherto the running and appearance of these trains have been marred by the fact that old six-wheel vans, specially fitted with mail compartments, had to be attached to keep the total weights of the trains within the prescribed limits for light expresses. Now, however, four new bogie lightweight combined luggage and mail vans have been ordered—and the first of them was recently delivered by the Schlieren Carriage Works (Schweizerische Wagons & Aufzügefabrik A.G.)—to replace the six-wheelers. These vehicles are similar in general design and construction to the rest of the stock on the trains, and run on bogies of the same type, which has proved most satisfactory on the earlier vehicles. The overall length is 20·4 m. (67 ft.) and the tare weight 24 *tonnes* (23½ tons), as compared with 34·5 *tonnes* for a van of standard type, and the capacity is 12,000 kg.

The interior of each van is arranged with mail sorting and parcels compartments, and a roomy luggage compartment, lavatory, prison cell, and dog kennel. The Post Office section is usually shut off from the rest of the van. An order for a further 20 lightweight coaches for internal services is being placed by the Federal Railways.

DISTRIBUTION OF A.R.P. STEEL SHELTERS.—The railway companies are undertaking the heavy task of conveying and delivering the new steel shelters which, now being constructed in many factories, are to be distributed in various parts of the country. The L.N.E.R. is particularly concerned also in the problem of their construction, many of the heavy steel components being made in the North Eastern Area. Delivery of shelters, which are assembled at the stations, has already begun at Newcastle, Gateshead, Leeds, Hull, and Sunderland, and is expected to proceed steadily as the supplies are received.

The Storstrøm Bridge at Night



View from the north shore showing the navigation spans at the summit of the bridge in the middle

View on the curved north end of the bridge; the single line railway is on the left and the pedestrian and cycle track on the right. The curbs, of white concrete, show up well in the light of the electric lamps. An illustrated description of this 2-mile rail and road bridge connecting the Danish islands of Zealand and Falster appeared in "The Railway Gazette" of October 22, 1937 (page 691)

RAILWAY NEWS SECTION

PERSONAL

Baron Edouard de Rothschild has been elected Honorary President of the French Channel Tunnel Committee.

Mr. C. Hely Hutchinson has been elected a Director of Rhodesia Railways Limited.

Lord Lloyd has been appointed a director of the Rhodesia Railways Trust. He took up his directorship on February 23.

Mr. H. C. Adams, M.C., M.A. (Cantab), Bridges Section, Ministry of Transport, has been transferred to the class of full Member of the Institution of Civil Engineers.

It is announced that Mr. J. H. Clifford intends to resign his seat on the board of the Cordoba Central Railway, when the transfer of that company to the Argentine Government takes place.

In accordance with Article 2 (1) of the contract entered into between His Majesty's Government and David MacBrayne Limited in December, 1938, for the maintenance of Western Highlands and Islands Transport Services, the Minister of Transport has nominated Lt.-Colonel Norman MacLeod, C.M.G., D.S.O., to serve on the board of directors of the company.

We regret to record the death on February 12 of Mr. J. H. Walsh, Vice-President and former General Manager of the Quebec Central Railway. Mr. Walsh, at the age of 16, entered the office of the contractor building the Quebec, Montreal, Ottawa & Occidental Railroad. When the line was completed in 1879 he joined the staff of the Operating Department. He was Travelling Passenger Agent at Quebec City when the Provincial Government took over the railway in 1880, and the next year was appointed Auditor of the Levis & Kennebec Railway, retaining office when the system was acquired by the Quebec Central Railway. In 1885 Mr. Walsh became General Freight and Passenger Agent of the Quebec Central Railway, and on January 1, 1906, he succeeded Frank Grandy as General Manager. He was appointed a Director of the company in 1913, and in 1927 became First Vice-President and General Manager.

We regret to record the death at his home in Surrey, of Mr. J. B. Corrie, a director of Chas. Roberts & Co.

Mr. W. A. J. Day, M.I.Mech.E., M.I.Loco.E., who has been appointed Assistant General Manager (Technical), South African Railways, in succession to Mr. W. A. Moyers, was educated at Bedford Modern School, England. He began work in 1896 as a premium apprentice at the Crewe works of the London and North Western Railway. After the completion of his apprenticeship he continued until 1903 in the electrical department of the London and North Western Railway. He joined the Central South African Railways in 1903 as draughtsman in the chief mechanical engineer's locomotive drawing office, Pretoria, and served in the same capacity in the workshops drawing office from 1904 to 1909. From 1909 to 1918 Mr. Day continued as draughtsman in the locomotive and carriage and wagon drawing office, the machinery and plant drawing office, and the indent's office of the chief mechanical engineer's department. In 1918 he was promoted to be Assistant to the Mechanical Engineer, at Durban, and in 1926 to be Mechanical Engineer at Pietermaritzburg, whence he was transferred in a similar capacity to Uitenhage. In 1929 he was appointed Mechanical Engineer at Pretoria. From 1930 to 1932 Mr. Day was Advisory Engineer at South Africa House, London, after which he returned to South Africa as Mechanical Engineer at headquarters. In June, 1935, he was appointed Assistant Chief Mechanical Engineer, and in March, 1936, Chief Mechanical Engineer.

Mr. W. A. J. Day, M.I.Mech.E., M.I.Loco.E.
Appointed Assistant General Manager (Technical), South African Railways

Indian Railway Staff Changes

The Railway Board of the N.W.R. has approved of the appointment of Mr. E. B. N. Taylor to succeed Mr. J. Mackinnon, who is shortly retiring, as Chief Engineer of the company.

Rai Bahadur Divakar Dutt has been appointed to officiate as Deputy Chief Engineer, N.W.R., as from December 22 last.

Mr. A. R. Soofi has been appointed to officiate as Deputy Chief Accounts Officer, N.W.R., as from December 12 last.

Mr. W. M. McGregor, Controller of Stores, E.B.R., has been granted six months' leave, as from April 4 next.

Mr. I. T. St. C. Pringle has been appointed to officiate as Deputy Traffic Manager, Transportation, E.B.R., as from December 10 last.

Dr. R. V. Clayton, Principal Medical and Health Office, G.I.P.R., has been granted 3½ months' leave as from December 8 last.

Colonel H. L. Woodhouse, Director of Civil Engineering, Railway Board, has been granted six months' leave as from November 18, and has arrived in London.

Mr. L. H. Swain, Deputy Chief Controller of Standardisation, Central Standards Office, for Railways, has been appointed to officiate as Director of Civil Engineering during Colonel Woodhouse's absence on leave.

Sir Ralph Wedgwood, who retired last Friday from the post of Chief General Manager of the L.N.E.R., has accepted an invitation to be one of the Parliamentary candidates for the University of Cambridge at the next general election.

Mr. J. Mackinnon, A.M.Inst.C.E., Chief Engineer—and recently officiating General Manager—of the North Western Railway, India, has been granted leave preparatory to retirement as from April 19. He was born in 1886, educated at Glasgow Academy

and Fettes College, and served his apprenticeship in civil engineering on the former Caledonian Railway. Subsequently, he was employed as an Assistant Engineer on construction

Mr. J. Mackinnon
Chief Engineer, N.W.R., India, 1937–39

work on that line, prior to his appointment to the Indian State Railways in a similar capacity in 1909; he was posted to the North Western system. For the first five years of his service in India, Mr. Mackinnon was employed on construction works and surveys, and later on open line maintenance. In 1916 he proceeded on military duty under the Railway Directorate in Mesopotamia, and, when holding the rank of captain, he was engaged on the construction of several new lines. On his return to the N.W.R. in 1919, he was employed on open line as Executive Engineer, and later as Divisional Engineer, with two intervals during which he was in charge of surveys for new lines. In 1926 he was selected to officiate as Deputy Agent at headquarters, and three years later he was appointed officiating Deputy Chief Engineer. In 1931, however, he was reported as Deputy Agent, the position in which he was confirmed in 1935. During that year Mr. Mackinnon officiated for a time as Chief Engineer, N.W.R., and in 1936, with that rank, as Senior Government Inspector, Bombay. In 1937 he was appointed to officiate as Director of Civil Engineering, Railway Board, after which he returned to the N.W.R. as Chief Engineer. It was in 1938 that he officiated as General Manager of that line for four months.

We regret to record the death on January 10 last of Zaki Bey Fahmy, Traffic Manager of the Egyptian State Railways, after a short illness. He had served for 40 years on the railways. Zaki Bey acquired his early railway training in England, where he was educated. He was for 14½ years Deputy Traffic Manager, and succeeded Mr. Weaver on his retirement from the post of Traffic Manager last spring, and was the first Egyptian to fill this post since the independence of Egypt.

Mr. H. R. McIntosh, who, as recorded in our issue of March 3, has been appointed Mechanical Engineer, Great Northern Railway (Ireland), joined that company in March, 1900, as a pupil apprentice in mechanical engineering at Dundalk works. After serving as relief shop and running sheds foreman from 1905-08, he was appointed District Locomotive Superintendent, Belfast, in September of the latter year. In January, 1919, Mr. McIntosh was transferred to Dundalk as Works Manager, Locomotive, Carriage, and Wagon, and became Running Superintendent in July, 1925. He was appointed Assistant Mechanical Engineer and Running Superintendent

Lafayette [*Dublin*

Mr. H. R. McIntosh
Appointed Mechanical Engineer, Great Northern Railway (Ireland)

in February, 1934. On January 29, 1933, the control of company's garages and garage staffs and responsibility for all mechanical work in connection with road motor fleet was transferred to the company's Mechanical Engineer. Mr. McIntosh was appointed Mechanical Engineer in control of the Locomotive, Carriage, and Wagon Department, including road motor fleet, from February of this year.

We regret to record the death on March 3, at the age of 78, of Mr. John William Bliss, former General Mana-

Left : Sir Ronald Matthews (Chairman of the L.N.E.R.), with Sir Ralph Wedgwood at Marylebone station on Friday last, when the former named a locomotive after the latter, on the occasion of Sir Ralph Wedgwood's retirement (*see account on page* 440)

ger of the Grand Junction Canal Company.

Mr. G. C. Hindson, System Engineer, Johannesburg, South African Railways, is to become Inspecting Engineer, Chief Civil Engineer's office, Johannesburg.

Mr. P. J. Louw, System Engineer, East London, South African Railways, is to become System Engineer, Johannesburg, and Mr. J. M. Southey, District Engineer, Johannesburg, is to become System Engineer, East London.

We regret to record the death on February 27 at the age of 59 of Mr. W. E. Harrison, late Chief Auditor and Accountant, Madras & Southern Mahratta Railway.

Señor Don Eugenio Calderon Montero Rios has been appointed Chief of the National Railway Service of the Public Works Department in Catalonia, with headquarters at Barcelona, according to an Order published in the Burgos *Official Bulletin* of January 28.

Mr. Peter Bennett, President of the Federation of British Industries, has invited the following to be members of the delegation which will participate in the forthcoming Anglo-German trade discussions:—

Lt.-Colonel Lord Dudley Gordon, President, British Engineers' Association, and Chairman, J. & E. Hall, Limited; Mr. A. C. Macdiarmid, Chairman, Stewarts & Lloyds Limited; Mr. Roger Duncalfe, Vice-Chairman, Association of British Chemical Manufacturers, and Director, British Glues & Chemicals, Limited.

The other members of the delegation are: Mr. Peter F. Bennett (President), Sir William Larke (Chairman), Messrs. G. H. Locock, R. G. Glenday, C. F. I. Ramsden, V. Watlington, J. E. Jordan.

We regret to note the recent death of Mr. W. P. Kenney, President of the Great Northern Railroad, U.S.A., who was prominent in the settlement of the country and in the development of traffic in the north-west. Born in 1870, he began his railway career on the Chicago Great Western system in 1888, and, after wide experience in clerical duties in the Traffic and Freight Departments of that line, the Empire Line, the St. Paul & Duluth Railroad, and on the Northern Pacific, he was appointed Assistant General Freight Agent on the Great Northern system in 1903. He was promoted to be Assistant to the Vice-President in 1905, and Assistant Traffic Manager four years later. Further promotion quickly followed, and in 1911 Mr. Kenney was appointed General Traffic Manager, and Vice-President (Traffic) a year later; he was also a Director and Member of the Executive Committee of the company. In February, 1918, he was elected President and also served as Federal Manager. He resumed his duties as Vice-President in 1920, but in 1932 was again elected President.

From *The London Gazette* of February 28: Regular Army Supplementary Reserve of Officers, Royal Engineers, Transportation: H. Hoffman to be Major (March 1); K. J. Hatherell (late Cadet, Skinner's School, O.T.C.) and T. McDowall to be Captains (March 1); S. A. Webster (late 2nd Lt. R.E., T.A.) to be Lieutenant (March 1); Sapper H. Knight (from R.E. [S.R.]), Off. Cadet C. C. Wood (from Univ. of London Contingent, O.T.C.), Sapper E. A. Toneri (from R.E. [S.R.]), J. G. Kerins, and I. E. Cameron, to be Second Lieutenants (March 1).

INSTITUTION OF LOCOMOTIVE ENGINEERS

The following elections were made on February 22:—

Members

Mr. H. N. Bassett, Joint Metallurgist, British-Argentine Railway Committee, Buenos Aires.

Mr. A. W. Bruce-Joy, Assistant Transportation Superintendent (Power), G.I.P.R., Bombay.

Mr. F. G. S. Martin, Controller of Stores, East Indian Railway, Calcutta.

Mr. G. A. R. Trimming, Chief Mechanical Engineer, East Indian Railway, Calcutta.

Mr. Hsien-Chien Yang, Delegated Engineer, Chinese Ministry of Railways, London.

Associate Members

Mr. R. C. Cochrane, Assistant Diesel Engineer, Buenos Ayres Midland Railway.

Mr. J. Gatto, Assistant Works Manager, Tucuman, Argentine State Railways.

Mr. T. J. Groves, Inspector of Materials, Central Materials Inspection Bureau, L.M.S.R., Wolverhampton.

Mr. J. J. Johnston, Draughtsman and Designer, Great Southern Railways, Dublin.

Mr. G. A. Lemon, Acting Assistant to Locomotive Works Superintendent, Derby, L.M.S.R.

Mr. J. G. Purves, Plant and Machinery Assistant, C. & W. Works, Derby, L.M.S.R.

Mr. P. Sahai, Assistant Superintendent, Rolling Stock, East Indian Railway, Lucknow.

Mr. N. G. Vint, Engineering Assistant, Crown Agents for the Colonies.

Transferred from Associate to Associate Member

Mr. G. da Cunha Da Costa, Assistant Works Manager, G.I.P.R., Bombay.

We regret to record the death of Mr. Matthew Blacklock, who until his retirement two years ago, was general manager of the Armstrong-Whitworth locomotive department. Mr. Blacklock received his early training at Beyer, Peacock's works, and was later for many years with the North British Locomotive Co. Ltd. After the war he joined Beardmore's locomotive department as chief draughtsman, and vacated that position to join the Armstrong-Whitworth locomotive-building organisation.

Lord Ashfield, Chairman of the London Passenger Transport Board, who last week underwent an internal operation, is regaining strength, and his condition is reported to be satisfactory.

Dr. C. H. Desch has been elected President of the Institute of Metals for the year 1939-1940, and Lt.-General Sir Ronald Charles, Mr. Kenneth Gray, and Lt.-Colonel J. M. H. Greenly, Vice-Presidents.

L.M.S.R. APPOINTMENTS

The following appointments have been approved by the directors of the L.M.S.R.:—

Mr. A. Reid, Mining Assistant, Divisional Engineer's Office, Glasgow, to be Assistant (Mining) Chief Engineer's Department, Derby.

Mr. C. F. Beck, Chief Clerk, Goods Department, Burton-on-Trent, to be Joint Goods Agent, Burton-on-Trent (L.M.S.R. and L.N.E.R.).

Mr. J. M. Robertson, hitherto an Assistant Agency Manager, has been appointed Agency Manager of the Provident Mutual Life Assurance Association in succession to Mr. R. B. Glassborow, who has retired. Mr. P. H. McCormack, F.J.A., formerly Joint Actuary of the association, has been appointed to succeed as Manager and Actuary Mr. C. R. V. Coutts, whose recent death severed a long connection with the association. The retiring directors of the association (Mr. Oliver R. H. Bury, Mr. Alfred R. Wagg, and Mr. Charles J. Hambro) were re-elected.

Don Eduardo Val (of the Anarchist party) has been appointed Minister of Communications and Labour in the new Madrid National Council of Defence which, under General Miaja's presidency, has been set up to control Republican Spain in place of the overthrown Negrin Cabinet.

Señor de Los Rios, Minister of Transport under Dr. Negrin, is one of the members of the ousted Republican Government of Spain who have arrived with Dr. Negrin in Toulouse.

Mr. F. H. James has joined the board of the English Electric Co. Ltd. In addition to this and other directorships held by Mr. James, he is Deputy-Chairman and Managing Director of the Imperial Continental Gas Association.

Mr. R. C. Giggins, who returned to London from Malaya a few months ago to take up a position as Assistant Manager in the Government & Railways Department of the General Electric Co. Ltd., has now been appointed Manager of that department in succession to the late Mr. W. E. Maddams.

LONDON & NORTH EASTERN RAILWAY COMPANY

A most difficult year—Improved passenger services—Punctuality — Freight traffic and the heavy industries — Operating improvements—Exceptional rate for bricks—Wages costs—Track renewals—Dock traffics—Need for the Square Deal—The future

The sixteenth ordinary general meeting of the London & North Eastern Railway Company was held at the Wharncliffe Rooms, Hotel Great Central, London, N.W.1, on Friday, March 4, Sir Ronald W. Matthews, Chairman of the company, presiding.

The Secretary (Mr. P. J. Dowsett) read the notice convening the meeting.

The Chairman: My lords, ladies, and gentlemen, in his address to you twelve months ago, my predecessor, Mr. William Whitelaw, spoke of the heavy losses that had fallen on the company by death or retirement among the directorate and staff during the previous year. This year it is my melancholy duty to report to you even more grievous losses that the company has sustained in the resignation from the board of Mr. Whitelaw himself, which took place at the end of September last, and the retirement, under the age limit, of our Chief General Manager, Sir Ralph Wedgwood, which takes effect at the close of this very day.

Mr. Whitelaw felt that the increasing pressure of family affairs left him no option but to give up the work to which he had devoted himself so unsparingly. No man probably in railway history has had so wide a knowledge of the problems of railway direction. No man certainly inspired greater confidence and greater affection in those who worked under his guidance. His sympathy with the difficulties of railway stockholders in the post war period is a matter of common knowledge, and the safeguarding of their interests was the keynote of the policy of his administration. This policy it is the intention of your directors to continue to the utmost of their abilities.

Sir Ralph Wedgwood, as I have already indicated, retires from active association with the work of this company this afternoon. He has held with great distinction the post of Chief General Manager since the formation of the company on January 1, 1923, and during the whole of that period he has laboured unceasingly in the interests of this railway. His outstanding abilities have earned him appreciation throughout the railway world, and his services to this company have been of the highest order. His gifts of leadership and negotiating ability have never been better displayed than in the present campaign for the freedom of the railways, and I am glad to be able to tell you that, at the urgent and unanimous request of the boards of the four main-line companies he has agreed to see to a conclusion, on behalf of the Railway Companies' Association, the work on which he has been so actively engaged.

I regret to have to inform you that, owing to his having accepted an important appointment in connection with air transport, Mr. Leslie Runciman has found it necessary to resign his seat on the board. In the short time he had been with us, he had proved himself a colleague of high value, and his services will be greatly missed. In place of Mr. Whitelaw, Mr. Runciman, and Sir Charles Batho, reference to whose lamented death was made a year ago, we have been fortunate in securing new colleagues, whose names are set out in the report, and who are admirably qualified in age, experience, and ability, to render many years of good service to the company.

The directors have appointed Mr. C. H. Newton to succeed Sir Ralph Wedgwood as Chief General Manager. Mr. Newton has serviced the company as Chief Accountant and Divisional General Manager (Southern Area), and it is with complete confidence that we are placing still greater responsibilities on his shoulders.

It is a matter of deep regret to me that on my first appearance in this chair I should have to report to my fellow stockholders the results of the worst and most difficult year in the history of the company with the exception of 1926, the year of the General Strike. I cannot say that it was unexpected, because it was unhappily already obvious when I assumed office that the early promise of the year was impossible of fulfilment. The year 1938 has been a period of acute anxiety both for the statesman and the trader, and the succession of crises, through which the world has passed, has had its inevitable repercussions on the volume of international trade.

I would ask you when comparing the financial results with those of previous years to bear in mind that receipts, other than fares in the London Passenger Transport Area, had the benefit of the 5 per cent. increase in rates and fares during the whole of 1938, whereas in 1937 the increase was only operative for the last three months.

Passenger Train Traffic

Receipts from passengers were £341,000 less than in the previous year, but £233,000 more than in 1936. We carried some 17 million ordinary passengers less than in 1937, and the corresponding receipts were £418,000, or nearly 4 per cent. lower. Workmen's tickets brought in £8,500 more than a year ago, and revenue from season tickets was higher by £68,000, or nearly 4 per cent. Second class tickets were withdrawn from the London suburban services at the beginning of the year, and the consequent transfer to third class bookings is largely responsible for the increase in third class season ticket receipts. Parcels and miscellaneous traffic by passenger train increased by £20,000, and receipts from mails and parcels post were better by £53,000. Total receipts from passenger train traffic were £17,357,000, a decrease of £268,000, or 1½ per cent. below 1937, but better than the 1936 figure by £387,000 or 2¼ per cent. To earn this revenue we ran during the year ½ million more passenger train miles than in the previous year, an increase of ¾ per cent. The increased mileage was due partly to the running of the Coronation and the West Riding Limited high-speed trains, and of the East Anglian express during the whole of 1938. Additional buffet car expresses between Liverpool Street and Cambridge were also run, and certain other services were augmented, as for example, between Newcastle and Carlisle and in the Teesside district.

On January 13, 1938, an accelerated electric train service was introduced in the North Tyneside area, between Newcastle and the coast. The improved service has had a stimulating effect on the passenger traffic, and the acceleration has been attended by a high standard of punctuality. Hard on the heels of this development came the inauguration, on March 14, 1938, of electric train working on the south bank of the Tyne between Newcastle and South Shields. The new service has run well and is giving satisfaction to the public. A review of the whole of our passenger train services shows that the standard of punctuality throughout the year was generally satisfactory when weather conditions were normal. The proportion of passenger trains which arrived within five minutes of their booked time was 93 per cent., compared with 91 per cent. for 1937. On an average our passenger trains were 1·41 minutes late at destination.

Freight Traffic Conditions

Freight traffics were disappointing. The fall in receipts was heaviest in respect of minerals and heavy merchandise (Classes 1-6), a decrease of £822,000 representing no less than 16¾ per cent. of the previous year's revenue. Coal class traffic receipts declined by £688,000, or 5¼ per cent., and light merchandise (Classes 7-21) showed a decrease of

£665,000 in receipts, or again 5¼ per cent. With a decrease of £6,000 in livestock receipts, the total goods train receipts were £2,182,000 down, or 7 per cent. below 1937. The quantity of freight traffic carried amounted to 121 million tons, a decrease of 15 million tons or 11 per cent. In round figures the decrease was 4½ million tons in minerals and heavy merchandise (Classes 1-6), 8 million tons in coal class traffic, and 2½ million tons in light merchandise (Classes 7-21).

Operating Improvements

Freight train mileage was reduced by 2¼ million miles during the year or 4¾ per cent. You will appreciate that it is impossible to cut down train mileage in direct proportion to falling tonnage if we are to continue to offer adequate services to our traders. Actually ton miles, which represent the volume of work done, declined by 9 per cent. The average freight train load, as was to be expected, fell during the year from 135·4 tons to 128·9 tons, a decrease of 5 per cent., while the average starting point wagon load at 8·09 tons for the year was 1 per cent. below 1937. On the operating side our results, as a whole, show an improvement over last year. The percentage of freight train miles to freight engine miles has risen again and has now reached 56 per cent. This figure, an increase in which indicates a saving of unproductive mileage, has shown a steady upward trend for the last ten years.

The Heavy Industries

The position of the heavy industries has been briefly mentioned in the review circulated with the accounts, but it may be of interest to add a few remarks to that summary. Leaving coal and coke out of account, over two-fifths of the tonnage of merchandise originating on our system is connected with the manufacture of iron and steel. That industry suffered a sharp set-back last year and the recession was particularly felt on the North East Coast where this company carries all the railborne traffic. Shipments of iron and steel on the River Tees were 153,000 tons below the previous year's figures, though our dock at Middlesbrough actually handled a slightly larger tonnage. Surplus stocks which had accumulated in the makers' hands have now been worked off, and, as imports are rigidly restricted, the recent reduction in prices should place the industry in a stronger position to attract new orders. In the whole country only 78 furnaces were in blast at the end of last year, as compared with 133 at the close of 1937, but many of the iron and steel works have been modernised and have an increased capacity. It is to be hoped that the industry will return to a more prosperous condition during 1939.

Farmers, too, during 1938 had a depressing year, and our carryings of agricultural traffics were less than in the previous year. You will see from Return XV appended to the accounts that agriculture makes a more substantial contribution than perhaps is generally realised to our merchandise carryings. Barley growers in particular had a bad season, and you will be aware that the Government are proposing to give them some further assistance. The sugar beet season was a short one, the yield per acre was low and the sugar content of the crop was affected by heavy rains in the autumn. The quantity of beet received by rail at factories on the L.N.E.R. was 29 per cent. less than in the previous season. Fruit growers had to face the handicap of frost at a critical time in the orchards, and the crops were smaller than in a normal year.

Brick Traffic Rates

A substantial fall in the tonnage of bricks forwarded is to some extent explained by diminished activity in the building trade. The value of building plans approved by local authorities for dwelling houses and other buildings showed a decrease of over 12 per cent. compared with 1937. Forwardings from brickyards in the Peterborough area declined, but there was some development in the region of Calvert, near Aylesbury. Road competition is especially severe for this traffic, and many of the brickmakers run their own motor fleets, but we are continuing our policy of quoting exceptional rates and offering to deliver at the actual building site. In this connection you may have noticed in the press accounts of proceedings before the Railway Rates Tribunal where our application for a reduced exceptional rate for bricks from Fletton to Halifax was opposed by the Northern Brick Federation, although as the evidence clearly showed the bricks would, failing the grant of the exceptional rate, have nevertheless been conveyed to Halifax, but by road and not by rail. After a hearing lasting four days the tribunal sanctioned the application and the traffic passed by rail. I mention this to illustrate the handicaps which our regulation by statute imposes, since road hauliers are free to quote for bricks, or any other traffic, without being subjected to the necessity of obtaining the sanction of an outside authority to the quotation.

Working Expenditure

Total expenditure on railway working rose by £1,001,000 to £40,541,000, and the ratio to total railway receipts was 86·89 per cent. The effect of the 1937 wages awards was felt for the full year in 1938, and it is estimated that the additional cost to the company was £698,000 more than the additional cost incurred in 1937. The rise in prices of fuel and materials generally was responsible for an increase estimated at £783,000 in our payments for these items.

The programme of maintenance of way and works was heavier last year than in 1937, and this in addition to higher costs for wages and materials increased our expenditure under the head of Abstract " A." Three hundred and forty-seven miles of our permanent way were completely renewed, an increase of 54 miles over the 1937 figure, and partial renewals also increased. We must expect our programmes of renewal to continue more or less at their present level, owing to the heavier demands on our track for higher speeds; and I may add that at the present level our expenditure on maintenance of way and works is considerably lower per mile of track than that of any of the other companies.

Rolling Stock

Mr. Whitelaw last year made a special reference to our rolling stock position. He told you then that we had authorised extensive programmes of new rolling stock to be carried out both in our own shops and by contractors. These programmes are now maturing, and should enable us to effect considerable economies in our repair costs in future years. On the question of complete renewals, the company are still acting on the policy outlined by Mr. Whitelaw last year, and are applying the formula for an adequate charge against revenue similar to that adopted by the other three companies.

The company's proportion of net revenue from Joint Lines was £610,000, an increase of £168,000. Included in the 1938 accounts are sums in respect of arrears of balances receivable under pooling arrangements and also for rates and rate relief recovered for preceding years. These arrears of pooling balances credited to Joint Lines have had no effect on the company's net revenue for the year as a corresponding amount has been deducted from the gross railway receipts included in Account No. 10. Interest and dividends from investments in other undertakings showed an increase of £64,000, due to the higher yield from our holdings in associated omnibus companies.

Dock Figures

Our dock figures for 1937 included four months' receipts and expenditure in respect of Tyne Dock, which passed out of our possession on April 30, of that year. If these figures are eliminated, a straight comparison with 1937 shows that in 1938 net dock receipts fell by £154,000. Although additional costs were incurred owing to improved wages conditions and for repairs due to damage by storms, the principal reason for the decline was the smaller volume of traffic. The tonnage of coal shipped at our docks and staiths decreased by nearly 4 million tons last year, whilst imports of all traffics decreased by 1¾ million tons. Timber imports were affected by the aftermath of a good year in 1937, and the demand for pitwood naturally suffered from the country's lower production of coal. Landings of fish decreased and a considerable number of trawlers is laid up. It is satisfactory that the tonnage of fish forwarded by

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rail from Grimsby and Hull has not fallen so heavily in proportion to the landings; on the other hand road competition for fish landed on the Tyne has been intensified.

You will have noted from the annual report that we have introduced a Bill into Parliament for the establishment of a consolidated superannuation fund for the salaried, supervisory and certain other of the staff of the company, but, as this Bill will be submitted for your approval at the special or extraordinary meeting to be held immediately following the close of this meeting, I will postpone my remarks on the Bill until then.

The statement of the company's accounts and the facts and figures I have just given you will have brought home the urgent necessity of immediate action to end the conditions under which British railways are now struggling. The margin of financial and economic stability is all but exhausted; and another year like the last would seriously threaten our whole commercial existence. The consequences of a continuation of the decline in receipts which has gone on since the early part of last year, and which reflects the cumulative effects of conditions which have existed for years, cannot fully be foreseen, but it is evident that they will be disastrous, not only to the stockholder and the trader, but to the general public as well.

Let me remind you that the railways are not merely an indispensable factor in the organisation of the nation's commerce and industry. They are also consumers of British products on a very large scale. Curtailment of railway services, or a drastic reduction of rolling stock, would mean a blow to national efficiency at a moment when that efficiency must be maintained by every possible effort. It would also mean a serious blow to British industry, and in particular to the heavy industries upon which the progress of the country so largely depends.

The "Square Deal"

What, then, my Lords, ladies, and gentlemen, is to be done? The railway companies have outlined the remedy; it must be applied without delay. The "square deal" is simply the recognition of twentieth century conditions. There are only too many branches of our national life which are stunted by the dead hand of legislation. It is that dead hand which the railways wish to throw off, so that they can overcome twentieth century difficulties by twentieth century methods. The railways have been entirely frank about their difficulties. They have made it clear that on their part they have no wish whatsoever to be forced into a position where their continued efficient existence will depend on subsidies. Nor do they desire to achieve their salvation either by being given preferential treatment, or at the expense of any section of the trading community. The "square deal" is an honest and fair attempt to achieve equality for all, and it offers safeguards to the trading community which go beyond those at present existing. No matter how efficiently and economically it is managed, no commercial or industrial concern can continue indefinitely if it is restricted by statute from competing on equal terms in its own particular market.

The longer the present position in British railways continues, the more precarious do their services become, and the more danger is there of a serious collapse in the whole railway transport system of this country; while the sooner the railways' claims are granted, the better hope is there of a recovery in the fortunes of the stockholders, of improvement in the nation's transport facilities, and of an increase in the efficiency and competitive power of British industry. It is with these thoughts constantly in mind that we are conducting the Square Deal campaign.

The Wages Award

I have already referred to the effect of the 1937 wages award, which has added to the annual expenditure of this company no less a sum than £1,058,000. In May, 1938, further claims were lodged by the three railway trade unions for increases of rates of pay and for improved conditions of service, which if conceded in full would involve the four main line companies in a further wage charge of some seven million pounds per annum. The claims of the unions have been heard by the Railway Staff National Tribunal, whose decision you will have seen in this morning's newspapers and which is, except for two minor matters, favourable to the companies.

Prospects

In conclusion may I venture to say a few words in regard to future prospects? I am leaving out of consideration any benefits that we may secure as the result of our appeal for a "square deal." We are faced still with the uncertainties of a highly charged political atmosphere in Europe, and the clearing of the international sky must be a condition precedent to a general improvement in world trade. But assuming, and I think we can assume it, that there is today a more clearly defined inclination towards peace, I think we can find some grounds for encouragement in the future. The steps which the Government are taking to improve our trade relationships, notable examples of which are the Anglo-American trade treaty and the Anglo-German Coal agreement, must, in normal circumstances, produce a considerable expansion in our export trade. I cannot emphasise too strongly the importance of export trade to a company such as ours. Not only does it help our rail traffics by increasing the purchasing power of the people, but it is of vital interest to use as dock owners. The more we export, the more we are able to import, and so there is provided for our docks that two-way traffic which alone can make them paying propositions.

Another hopeful feature to which I have already referred is the absorption of stocks of all classes of iron and steel. An improvement in the iron and steel industry affects this company in many ways. Not only do we benefit from the increased carryings of the iron and steel but we get the advantage of the demand for such ancillary materials as coal and coke, limestone and all classes of refractory goods, such as furnace bricks and sand. I do not think I am unduly optimistic in looking forward to a considerable increase in steel production during the current year. With improving trade prospects, with, I hope, a fairer field for meeting competition, and with the determination which I know exists throughout the company's service to do everything possible to increase revenue and reduce costs, I feel that in bidding farewell to 1938 we may well have left the worst behind us.

My lords, ladies, and gentlemen, I now beg to move that the report of the directors with relative statement of accounts for the year ended December 31, 1938, be received and adopted. I will ask the Deputy Chairman to second the resolution.

Sir Murrough John Wilson: I beg to second the resolution.

Shareholders' Remarks

Mr. J. Clancy addressed the meeting on various matters relating to the finances of the company in the past. On a desire being expressed by the meeting that they did not wish to hear more on this subject, the Chairman said that if Mr. Clancy would write to him he would make an appointment to see him.

Mr. Mason asserted that this body of directors held no fewer than 162 other appointments as directors of limited companies which were large concerns and demanded a great deal of their time. He would like to dismiss half of them and appoint ten whole-time assistant secretaries with any amount of executive powers and they would soon have a dividend. He would like to ask how many men had been discharged during the last year. He hoped the Chairman would exercise his authority and require his colleagues to resign some of their directorships.

Councillor J. Wilson wished to endorse the Chairman's remarks with regard ot Mr. William Whitelaw—a man of charming personality, of sterling character, and one who to every question gave an explanation rather than an excuse. Continuing, he again referred to the Railway Rates Tribunal, criticising the decision of that body in refusing an increase in charges in the case of those traffics upon which industry and indirectly the country's revenue depended that were carried at 10d. a ton and under. Coal was once 12s. a ton at the pithead; it was now 25s. a ton, and the railway carried it at the same price. Iron and steel and agriculture was carried at the same figure as it was carried twenty years ago.

The rates on the heavy traffics upon which industry depended should be adjusted so as to give a revenue of 2½ per cent. minimum with a 3 per cent. maximum.

Mr. John Miller, speaking not only as a stockholder, but also as representing the British Railway Stockholders' Union, desired to be associated with the Chairman's appreciation of the great services rendered by Mr. Whitelaw as Chairman of the company since its incorporation under the amalgamation of the railways. He thought the railways were to be congratulated upon the conception of their policy of a "square deal" and upon their propaganda campaign in favour of that policy. But the "square deal" even if attained was not sufficient in itself to restore the fortunes of the railway companies. Commercial management, and particularly salesmanship, though improved from the old monopoly days, were still behind the times, and behind the methods of road transport. The importance of this he knew was realised at headquarters, but was not fully recognised or practised at many provincial stations and by many local officers. There appeared to be lacking a system of supervision and visitation of railway stations and goods depots. He suggested that the board of directors be divided into committees, each allotted a district and responsible for that district, pulling its whole weight to increase local revenue, including the hotels. With regard to directors the test ought to be their knowledge of business affairs, whether as large stockholders, who were experienced business men, or as senior executive officers promoted as directors. He hoped that when the "square deal" went through, the railway companies would carefully consider further steps of rationalisation with road transport, both passengers and goods. The most effective way for the stockholders to help the campaign was for every stockholder to join the Stockholders' Union forthwith.

Mr. J. H. Eddison claimed that for defence purposes the railways were just as necessary as our army, navy or air force, yet they had not cost the State one penny in a hundred years. They were the kingpin of our defence system, yet the Government had the proprietors beaten to their knees begging for mercy. Three hundred and sixty millions of railway stock received no interest for 1938 and a hundred and ninety-seven millions of this was L.N.E.R. stock. He maintained that there should be no more capital expenditure until their standard revenue was in sight.

Mr. J. E. Allen considered that the heavy road vehicles should be taxed on an ascending or progressive scale, because the heavier the vehicle the more its wearing power on the road grew.

Mr. Schierwater suggested that the £100 stock should be reduced into one hundred units on the ground that the smaller the denomination of the stock, the higher value it would command on the Stock Exchange. It would give many more people a chance to become interested in the railways.

Mrs. H. M. Stacey asked that all free passes and privileges be done away with.

Dr. E. C. Carter recommended the reduction of services during the slack periods of the day as a means of calling the attention of the public to the plight of the railways. He asked whether the carriage of mails really brought a profit to the company.

Mr. J. H. Adison referred to a statement made by Lord Horne at the Great Western meeting to the effect that arrangements had been made to hand over the four main-line railways during the crisis in September at a few hours' notice, and he asked how the shareholders would have fared.

Mr. W. Porritt Taylor desired that the directors would persevere with their campaign until the time when the railways had as much liberty to refuse unprofitable traffic as the road companies had at present, and the road companies would be as fully compelled to handle as common carriers such traffic as was offered to them. It was the duty of every stockholder to correspond with their Members of Parliament so that the railways should get the fair terms to which they were entitled.

Mr. R. H. Whitehorn said that a bright green, clean Pacific locomotive was a joy to the eye and an excellent advertisement to the company. A dirty green locomotive was an offence to the eye and a very bad advertisement. If it were not possible to return to the pre-war standard of cleanliness of locomotives, he would ask that they should be painted black to cover their deficiencies.

Mr. J. H. G. Bender also referred to the appearance of the locomotives, and to the state of trains in sidings.

Miss Bunney asked how many hours approximately during the year the directors spent on the company's business.

Miss Lancaster put forward a suggestion for the appointment of a lady director who should give all her time to the hotels and not to the railway.

Mr. R. S. Lawrence wished to know how the shareholders could obtain the restriction of the number of directorships held by the directors. He contended that the results of 1938 had shown that it was a bad move to apply for the increase in tariffs, because it gave the roadways a good lever to come and take more traffic from the railways.

Mr. W. E. Lucas raised the question of labour charges, referring to the amounts earned by some engine drivers.

Mr. R. J. Reeve said he wished a resolution to go before the stockholders: That all directors of the London & North Eastern Railway should be compelled to retire on reaching the age of 65.

The Marquess of Aberdeen and Temair asked the Chairman to state the policy of the company with regard to allowing employees to serve on National Service Committees.

Councillor J. Wilson suggested to the Chairman that he should consider whether stockholders should be permitted to travel to the meeting at the same privilege fares as were granted to the employees, and asked whether a resolution to that effect would be in order.

The Chairman: I am afraid I must rule Councillor Wilson out of order as far as his resolution is concerned, but if it is the general wish of the stockholders we will give it very serious consideration.

Councillor Wilson: Thank you, Mr. Chairman.

Chairman's Reply

The Chairman: My Lords, ladies, and gentlemen, you have given me a rather considerable task this afternoon. I do not remember ever having so many speakers at one of these meetings. I will do my best to deal with the various points which have been raised. As far as Mr. Clancy is concerned, I have made my offer to him, and I do not think I need make any further observations.

Now we come to this vexed question of directorships. There has been a good deal said about Directors this afternoon—some rather hard things. This is my first appearance in the chair, but I would say to you very frankly: Surely I must be the person who is best able to judge the service I get from my co-directors? I want to make it quite clear that, as far as I am concerned, I am satisfied, first of all, that, from the directorial point of view, I am getting the service to which I am entitled from my fellow directors, and I am equally certain of this, that if any of my co-directors felt that they were unable to give the services required from a director they would not hesitate to put themselves in my hands, as Mr. Runciman has already done. There seems to me to be a great deal of confusion as to what the functions of a director are. Directors are not responsible for the management of the company. That is the function of Sir Ralph Wedgwood and the managerial staff under him. The directors are supposed to, and do, maintain contact with the outside world, if I may put it like that. They function, not only through their boards and committees here in London but we have our local boards; somebody made reference to that; I think it was Mr. Miller. We have a Scotch, a North-Eastern, and South Area Local Board composed of gentlemen resident in those particular parts of the country who are in close touch with the interests of that section of the line. I myself think that some of this criticism in regard to outside directorships is very ill-advised, if I may say so. We are constantly being urged to appoint to our board "young men of wide business experience." May I suggest to you that you cannot have young men, or any men, of "wide business experience" unless they sit on the boards of other companies. You do not want a man who has spent the whole of his life in a groove, bring him here and then put him into another groove. We do want men with wide business experience. With regard to the age of the directors, may I

say that the average age of directors in this company is 57½—in fact I think it is a little less now. That, I think you will admit, compares favourably with the age of directors in any important industry or on any commercial board.

Now, if I may deal with the questions, Mr. Mason asked one question in regard to the number of men discharged. There has been a reduction, since 1938, of 7,000 employed on this company. May I thank both Councillor Wilson and Mr. Miller for their very kind observations in regard to myself? I do appreciate the goodwill of my fellow stockholders in this the early stages of my career as a railway chairman. I do not promise anything at all in the way of miracles, but I can assure you that what I can do for the benefit of the stockholders I shall be only too anxious and ready to do.

Councillor Wilson has raised various questions in regard to the Railway Rates Tribunal, and particularly in regard to the increased rate of certain classes, short hauls, of heavy traffic. I appreciate the point he has made. I think perhaps if Councillor Wilson could spare the time, the best way in which this matter could be dealt with would be if he came and saw me at Marylebone, so that we might go further into what I think he will agree is a complicated question.

I have already dealt with the question Mr. Miller raised in regard to directors on the spot, and explained the situation in regard to local boards. Naturally I can assure him that one of the main objects of our present campaign in regard to the "square deal" is to secure the co-ordination of transport, both in the interests of our own stockholders and in the interests of the country at large. Two gentlemen asked what the position is in regard to the "square deal." I think you will realise that at the present stage I have to be somewhat guarded in what I say. The "square deal" is at present before a Committee of the Transport Advisory Council; it is proceeding favourably, with a large measure of agreement, but I am not at liberty to forecast the recommendations of the Committee or the Council. I am sure that you will not ask me to go further than that, when negotiations are at such a very, very delicate stage.

A Shareholder: When shall we know, please?

The Chairman: I wish I could tell you, sir, but I am afraid that is a matter more for His Majesty's Government, for the House of Commons, than it is for me.

Mr. Eddison raised the question of capital expenditure. I think all of us, as business men, would realise that we should not embark on capital expenditure unless we felt that we were going to get an adequate return for the money expended—not only the actual service of the capital raised, but some addition towards the general revenues of the company. If we had taken the view that has been put forward this afternoon, we should not have acquired our interest in passenger road transport companies which are bringing us in a very handsome return at the present time.

Mr. Allen raised some very interesting observations on road competition, with which, I think, we are generally in agreement, but I am afraid it is hardly a matter upon which we can intervene.

Mr. Schierwater's suggestion in regard to the division of stock into £1 units is one which we should be perfectly prepared to examine. I am not quite clear really what advantage would be gained. I do not think there is any difficulty at the present time in buying stock in any amount you require from £1 upwards. It cannot be less than £1.

Mrs. Stacey has asked, and I think other shareholders have asked, for the abolition of all free and privilege passes. I must ask shareholders to realise that these free and privilege passes are part and parcel of the conditions of service of the company's servants. That could only be altered by, I am afraid, a very long and possibly serious struggle, which might involve the company in a very much heavier loss than any advantage which we might gain from getting that altered.

Dr. Carter referred to certain trains which are running up and down with nobody in them. If Dr. Carter would be good enough to give us details as to where those trains are, we should be very pleased to look into it with a view to reducing the services. He also raised the queston whether the carriage of His Majesty's mails was profitable. It is quite obvious that I must not say too much in regard to that; the repercussions might be such as were not satisfactory. I can say that there is a profit.

Mr. Adison raised the question of what would be the position if the Government took over the railways. I think it is generally known that under those conditions, in the event of emergency (which I was very pleased to hear one stockholder, at any rate, say he did not imagine was coming) the Railway Executive Committee would take over the railway on behalf of the Government. In regard to the question of compensation, I cannot say anything definite at the present moment. All I can say is that the matter is at present under negotiation with the Government, and that every step will be taken to safeguard the interests of the stockholders.

Mr. Porritt Taylor suggested that the common carrier obligations should be placed on road transport as well as on rail transport. On that point I suggest that if we get what we want—which is the right to charge what we desire so long as the rates are reasonable—that really meets the case, and there will be no particular object in pressing for common carrier obligations to be placed on road transport; in fact I think it would be very difficult for them to undertake.

A few gentlemen have made some pointed observations in regard to the cleanliness of our locomotives and rolling stock. Ladies and gentlemen, you cannot have it both ways. If we economise, as we must economise at the present time, it must mean some deterioration in the condition of our stock. I am afraid so long as we have to economise, as we have to at the present time, that is unavoidable. Might I say that the question of painting the locomotives black instead of green has been under consideration from time to time. I myself hope that it will never be necessary to depart from the green, and now the blue, engines which are such a feature of our railway company.

Miss Bunney asked me rather a poser when she said: How many hours does a director spend on the business of the company? I cannot pretend to answer that. Some of us sometimes work very late hours on company's business. I have no means of checking the after dinner work of directors any more than they have of checking mine.

Mrs. Lancaster made a suggestion that we should have a lady director. It is a suggestion actually which we have already thought of for ourselves, to have a lady looking after and making suggestions in regard to the improvement of conditions in waiting rooms, refreshment rooms, and so on. I am very grateful to Mrs. Lancaster for raising that point.

Mr. Lawrence asked me a question as to how he should proceed if he wished to move a resolution reducing the number of directors. This is the procedure that he must adopt: If he wishes to reduce the number of directors to a figure of not less than 16 he must give notice of his proposal as Special Business. Without an Act of Parliament the number cannot be reduced below 16.

I do not think there is any more to which I should reply, except to Lord Aberdeen's query in regard to the National Service Committees.

Mr. Mason: Might I ask what movement you are making towards reducing the wages?

The Chairman: That is a pertinent question. As you know, the Railway Staff Tribunal finding has only been published this morning and, therefore, it is a little early to attempt to formulate our own policy at the present time.

Mr. Mason: Sir Ralph Wedgwood gave notice that the company would apply for a reduction in wages.

The Chairman: That statement of Sir Ralph's still stands. This matter is now engaging the consideration of the four companies. I cannot say more than that at the present time.

Would Lord Aberdeen be good enough to write to me in regard to the point he raised about our employees sitting on National Service Committees?

I think that disposes of all the questions. The resolution which I have already read out to you has been proposed and seconded. I will put it to the meeting.

The resolution was put to the meeting and carried unanimously.

The Chairman: I now beg to inform the meeting that in accordance with the provisions of the Railways Act, 1921, and the North Eastern, Eastern, and East Scottish Group Amalgamation Scheme, 1922, the following directors retire, and being eligible offer themselves for re-election:—The Hon. Rupert E. Beckett, the Rt. Hon. Lord Burghley, M.P., A. R. Gray, Esq., Geoffrey H. Kitson, Esq., Lieutenant-Colonel the Hon. A. C. Murray, C.M.G., D.S.O., the Rt. Hon. Viscount Ridley, W. K. Whigham, Esq., Sir Murrough J. Wilson, K.B.E.

The resolution for the re-election of the above mentioned directors was moved by the Chairman and seconded by Mr. Miller, and on being put to the meeting was carried unanimously.

The Chairman: The next business is to inform the meeting that Sir Laurence E. Halsey, K.B.E., F.C.A., one of the auditors, retires and being eligible offers himself for re-election.

Sir Charles MacAndrew: Mr. Chairman, my Lords, ladies, and gentlemen, I beg to move: "That Sir Laurence E. Halsey, K.B.E., F.C.A., be and he is hereby re-elected an auditor of the company."

Sir Raymond W. Wood: I have much pleasure in seconding that resolution.

The resolution was put to the meeting and carried unanimously.

Mr. Mason moved and Councillor Wilson seconded a vote of thanks to the Chairman, directors, and staff.

The resolution was put to the meeting and carried unanimously and with acclamation.

The Chairman: Mr. Mason, Councillor Wilson, and ladies and gentlemen, thank you very much. The business of the meeting is now concluded, and we proceed with the Wharncliffe meeting.

Mr. Miller moved and Councillor Wilson seconded a vote of thanks to Sir Ralph Wedgwood for the services he has rendered to the company.

The resolution was put to the meeting and carried unanimously and with acclamation.

Sir Ralph Wedgwood: Thank you very much.

EXTRAORDINARY GENERAL (WHARNCLIFFE) MEETING

The Secretary (Mr. P. J. Dowsett) read the notice convening the meeting.

The Chairman: My Lords, ladies, and gentlemen, this Bill has been promoted for the purpose of establishing by Act of Parliament a consolidated superannuation scheme for the salaried and supervisory staff and certain of the women and girl clerks in the company's service.

It will be helpful to refer shortly to the history of the negotiations which since the formation of the company in 1923 have from time to time taken place for the establishment of such a scheme and which have led up to the proposals which are before you in the Bill now submitted for your approval. By force of the Railways Act, 1921, all the existing liabilities and obligations in regard to superannuation and other funds of the constituent companies were transferred to the company and soon after amalgamation the Railway Clerks' Association, on behalf of their constituents and of those of the other unions concerned, pressed each of the railway companies to merge existing superannuation funds into one consolidated fund. In consequence, a clause was inserted in the company's Act of 1923 closing existing funds to new entrants into the service, but the company made arrangements whereby new entrants could make provisional contributions pending the establishment of a new fund.

The London Midland & Scottish Railway Company in 1924 introduced a scheme for a consolidated fund and the men's representatives pressed the company to promote a Bill on similar lines. An actuarial investigation, however, showed that the cost to the company of instituting a new fund on these lines would have involved the company in an expenditure which it could not afford.

In the Session of 1926, however, the company promoted a Bill for establishing a superannuation fund for staff entering the service since amalgamation, but the Bill failed to secure a second reading on the ground that it failed to consolidate the existing superannuation funds.

In the Session of 1927 the Southern Railway Company promoted a Superannuation Bill which included both the members of their existing funds and new entrants, and this Bill received the Royal Assent. Thereupon negotiations with the Railway Clerks' Association were resumed, but again without result.

In 1934, however, the London Midland & Scottish and the Southern Railway Companies decided to alter their schemes by introducing a higher rate of contribution for new entrants into their service, and thereupon the Railway Clerks' Association approached the company with the suggestion that, if a higher rate of contribution were paid by the whole of the London & North Eastern Railway staff concerned, it should be possible to formulate a new scheme for a consolidated fund. Negotiations then ensued between the company and a committee representing the staff, during which the company's Actuary and the Consulting Actuary of the Railway Clerks' Association were consulted, with the result that the scheme embodied in the Bill before you was evolved.

The scheme is modelled largely on the Southern Railway scheme and embraces the whole of the salaried staff, including women and girl clerks. The benefits comprise a pension, calculated according to the number of years of membership, and a lump sum payment on retirement of not more than a year's salary. Provision is also included for the conversion of the superannuation allowance into a joint annuity in favour of the member and his dependants. In the case of members of existing funds, the basic rate of contribution to the new fund is 4 per cent. of salary, but these members are given the option of choosing between the new benefits and the benefits of their existing fund. The basic rate of 4 per cent. will also apply to contributors to the provisional fund before January 1, 1936, but entrants after that date will contribute at a basic rate of 5 per cent. of salary, the rate of contribution of course varying according to age at entry. It will be appreciated that the company's annual commitments in regard to superannuation and pensions funds are heavy, but the Bill will ensure that in future adequate reserves shall be gradually built up within the fund to meet not only these liabilities but also the cost of the improved benefits which will be granted in consequence of the increased contributions.

The fact that the existing staff will make the increased contributions provided for by the Bill, that future entrants to the fund are to be admitted upon a self-supporting basis, and that the company, in addition to its contributions is to make such periodical payments as may be certified by the Actuary to be necessary to secure the solvency of the fund, will ensure the financial stability of the fund. The Bill, if passed into law, will bring to an end a long standing grievance on the part of the staff, and will in the long run, it is thought, prove of financial benefit to the company, and I therefore have no hesitation in recommending the Bill, which is now submitted, for your approval.

The resolution is: "That the following Bill introduced into Parliament entitled: 'A Bill to establish a superannuation fund for certain of the staff of the London and North Eastern Railway Company; to provide that payments thereout shall not be assignable or chargeable; to provide for winding up the affairs of Thompson McKay & Co. Ltd.; and for other purposes,' which is now submitted, be and the same is hereby approved, subject to such additions, alterations and variations as may be determined by the directors, and as Parliament may think fit to make therein." I beg to move that resolution.

Sir Murrough J. Wilson: I beg to second the resolution.

Mr. Trimnell asked whether servants already superannuated could be included in the Bill.

The Chairman: I am afraid it is quite impossible to bring them into the Bill.

Mr. Miller: Is the fund solvent as it is starting now, or are you taking in reserve to make it solvent?

The Chairman: These steps are being taken to make the

fund solvent. That is the reason underlying this Bill.

Mr. Leather asked what additional burden this Bill would place upon the resources of the company.

The Chairman: I will deal with Mr. Leather's query. Apart from the company's contribution pound for pound of the men's contribution, which will involve an unspecified increase owing to the increased rate, the new scheme will impose an additional liability on the company of approximately £56,000 per annum for increased benefits. It must be remembered that there are substantial deficiencies in the existing funds. We inherited these deficiencies. The £56,000 is a considerable sum, but it is merely bringing our servants into line with the servants of the other companies. The expense is for the time being that of the shareholders, but in the long run we are satisfied that it will improve the financial position and not worsen it. There are many reasons to justify this Bill. Firstly, as I told you, the cost of providing the benefits is £56,000 a year in round figures. In addition, the company will make increased contributions to the fund pound for pound of the staff contributions. That is the principle underlying all superannuation schemes. In the case of the new entrants, the fund will be self-supporting with a basic 5 per cent. contribution both from the company and from the staff, that is 1 per cent. higher than the basic rate in force on any other railway for new entrants. The future cost will vary with the number of employees recruited from time to time. In order to obtain statutory authority for the new fund, it is necessary to deal with the deficiences in the old funds for which the company are liable. If nothing is done, a serious situation will arise in the near future as the existing funds of reserve will quickly be exhausted and all pensions will have to be paid out of revenue. By facing the position now, and making suitable provision for liquidating the deficiences, the company will pay less in the long run and also safeguard its general financial position. Further, after the fund has been in existence for a period of years, the company will be freed from the burden of paying *ex gratia* payments or grants in the case of retiring members of the staff who have not been eligible for membership in one of the existing funds.

The proposed consolidated fund will be achieved at an equitable cost between the company and the staff, and if the proposals fall through it may very well be that the company will be pressed to establish a new fund giving the same benefits as are now proposed without increasing the contribution from members of existing funds. Until that object is attained the company's Bills will be blocked in Parliament, and the company would receive no sympathy from the staff or the general public or the Government. In short, my Lords, ladies, and gentlemen, the present situation in regard to superannuation arrangements really cannot be defended, and there is not likely to be a better opportunity of putting it right on reasonable terms. I think I can put this to the meeting now.

The resolution was put to the meeting and carried.

We now come to the London Passenger Transport Board Bill. I beg to move that the following Bill which has been introduced into Parliament, entitled: "A Bill to empower the London Passenger Transport Board to provide certain services of trolley vehicles; to construct new works; to acquire lands; and to raise additional moneys; to extend the time for the compulsory purchase of certain lands and the completion of certain works; to confer further powers on the board including powers as to the running of public service vehicles; and for other purposes; which is now submitted, be and the same is hereby approved so far as such Bill proposes to confer powers on the company, subject to such additions, alterations and variations as may be determined by the directors, and as Parliament may think fit to make therein." I beg to move that resolution.

Sir Murrough J. Wilson: I beg to second the resolution.

The Chairman: It is purely formal. May I put it to the meeting?

The resolution was put to the meeting and carried unanimously.

The Chairman: That concludes the business of the meeting.

The L.N.E.R. in 1938

The following is the Chairman's review of the L.N.E.R. Company's business during 1937:—

The improvement in gross revenue which was a welcome feature of the company's results for 1937 did not continue during the past year. Industrial activity in Great Britain during 1938 did not in general reach the level attained in the previous year, and this is reflected in the decreased volume of freight traffic passing by railway. The 5 per cent. increase in rates and fares imposed as from October 1, 1937, was effective only for the last three months in that year, whereas it operated over the whole of the past year. The 1938 receipts therefore benefited by the increase in comparison with previous years, but even so there have been substantial decreases from freight traffics. The position is shown in the following table, which also gives the corresponding figures for 1929:—

——	Passenger	All merchandise and livestock	Coal and coke	Total
	£	£	£	£
1929	19,097,000	21,853,000	14,132,000	55,082,000
1937	17,625,000	17,898,000	13,174,000	48,697,000
1938	17,357,000	16,405,000	12,486,000	46,248,000
Decrease :—				
1938 compared with 1937 ..	—268,000	—1,493,000	—688,000	—2,449,000
Decrease :—				
1938 compared with 1929 ..	—1,740,000	—5,448,000	—1,646,000	—8,834,000

Receipts from passenger train traffic showed a decrease of £268,000 in comparison with 1937, but the number of passengers carried (excluding season ticket-holders) was actually 17,767,000, or 8·31 per cent., less than in the previous year. Short-distance passenger business is particularly susceptible to road competition, and there was a considerable loss of this class of traffic. Long-distance traffic has been maintained, although the extension of holidays with pay does not appear to have added materially to passenger travel. Freight traffic has suffered from the recession in the heavy industries, and the total tonnage carried decreased by 15,046,000 tons, or 11·08 per cent., in comparison with 1937. The production of steel, at 10,393,800 tons, was 20 per cent. below the record figure for 1937, whilst the amount of pig iron produced fell by a similar percentage to 6,762,700 tons. The tonnage of merchant shipping launched during the year was somewhat higher than in 1937, but at the end of the year the tonnage under construction in British shipyards was only 780,000 tons, or 31 per cent. less than at December 31, 1937. Coal production amounted to approximately 228 million tons, a decrease of 5 per cent.; the volume of coal exported fell substantially, and home consumption also declined mainly on account of the reduced demands of the iron and steel industry.

The high speed trains—the Silver Jubilee and the Coronation—have maintained an excellent standard of punctuality throughout the year and continue to carry good loads. The removal of the speed restriction necessitated by the reconstruction of the bridge over the River Calder, near Wakefield, has permitted the West Riding Limited to run closely to schedule. The East Anglian continues to be popular with Norwich and Ipswich people, though its running has recently been hampered by severe speed restrictions necessitated by works in connection with the electrification of the lines between Liverpool Street and Shenfield. The replacement of older type passenger and goods vehicles by stock of modern design has continued. The most notable additions to the company's passenger stock are two new trains for the Flying Scotsman which include a special type of buffet car, and a new train for the Hook Continental. The company's policy of providing special wagons for particular traffics, where

such a course is justified, has been continued, the latest addition to the stock being six units each consisting of two road/rail tanks mounted on a railway chassis, for the conveyance of edible oils.

Return on New Works Expenditure

Apart from expenditure under the Passenger Duty Scheme, the Development (Loan Guarantees and Grants) Act, 1929, and the Treasury Agreements, the company incurred an expenditure of £539,757 on works estimated to yield savings or produce additional revenue. The economy resulting from this expenditure amounted to £110,634, and the additional revenue obtained totalled £29,892. Taking the actual savings and additional net revenue together, the total net revenue secured has been £140,526, equal to 26 per cent. on the cost. Since 1923, until December 31, 1938, 2,452 schemes have been carried out and reported upon; the total expenditure incurred has been £5,860,000; the annual savings and additional net revenue arising have been £1,703,000, equal to 29 per cent. on the outlay.

Good progress continues to be made with schemes being carried out under the Railways (Agreement) Act, 1935. The largest of these projects is the electrification of the lines between Manchester, Sheffield, and Wath, where the work on the engine sheds at Darnall and Wath is well advanced; the permanent way work is in hand, and contracts have been placed for a substantial part of the equipment required. Certain of the schemes have been postponed owing to high cost of materials, and it was found desirable to modify the plans for extending the fish dock at Hull consequent upon the depression which has come upon the fishing industry. The electrification works which are being carried out on the London suburban lines of the company under the London Passenger Transport (Agreement) Act, 1935, are also making satisfactory progress. Close touch has been kept with experiments which have been going on with various forms of automatic train control, and during the year authority was given to lay down an experimental installation of what is known as the Hudd system of automatic train control, on the company's main line between Edinburgh and Glasgow. In the interests of economy we have withdrawn a number of unremunerative passenger trains, mostly on branch lines.

Passenger and Goods Speed Improvements

We are continuing to improve the average speed of our trains. The figure of coaching train-miles per train-hour was 14·44, in comparison with 14·37 in the previous year. It is noteworthy that this improvement has been continuous since 1925, when the number of train-miles per train-hour was 13·33. The fall in freight traffic has meant that there has been less occupation of the line, with the result that the average rate of movement of freight traffic has improved. Freight train-miles per train-hour rose from 8·85 to 9·26, nearly 5 per cent. better than in 1937. With the smaller volume of traffic the figure of net ton-miles per total engine-hour fell by 2 per cent. to 507·50. The average wagon load and the average freight train load also declined, but this was to be expected in view of the lighter traffics. It is satisfactory to find that the freight shunting-miles per 100 train-miles have fallen again. Since 1927 this figure has dropped from 77·48 to 65·63, a decrease of 15 per cent. This represents a substantial economy in operation, and shows that we are now reaping the benefit of the more up-to-date methods of marshalling wagons which have been introduced within recent years.

Work has been commenced, and is proceeding steadily, on the locomotive testing station at Rugby, which is being built as a joint undertaking with the L.M.S.R. Company. When the station has been completed, valuable data will be obtained for the purpose of increasing the efficiency of the company's locomotives.

Rates and Fares

The Railway Rates Tribunal held the annual review of standard charges and exceptional charges in May, and its judgment stated that, from the evidence, it did not appear that the slackening in the volume of railway traffics which became evident after midsummer of 1937 was accelerated to any material extent, if at all, by the increase of railway charges which operated from October 1, 1937. The tribunal therefore concluded that the net revenues of the railway companies were greater in 1937 than they would have been had such an increase not been made, and it was decided not to make any modification of existing charges.

In conjunction with the other main-line railway companies and the London Passenger Transport Board, application was made in January of this year to the Railway Rates Tribunal for authority to increase passenger fares on suburban lines in the London Passenger Transport Area by approximately 5 per cent. These fares were excluded from the increase in rates and fares which has been operative since October 1, 1937, and if the application is granted it will bring the general level of passenger fares of the main-line companies in that area into line with similar fares elsewhere in the country. The Transport Board also proposes to increase certain fares on its services. These suburban fares are unduly low, and the proposed increases have become necessary owing, among other factors, to the rise in the general level of costs, and, if sanctioned, will benefit the revenue position of the company which, through the London Passenger Transport Pooling Scheme, has an interest in passenger receipts throughout the London Passenger Transport Area.

There are indications in the current year that industry is once more on the up grade. The reduction in the price of steel from January 1, 1939, should stimulate enterprise, and it is hoped that current international negotiations will ultimately help the coal exporting trade. Prospects for shipbuilding are very uncertain, although a number of berths are occupied with Admiralty work. A variety of industries is busy with work in connection with the rearmament programme. A more encouraging sign would be a steady flow of new commercial orders, but any sustained improvement in general trade can only follow the clearing up of the international situation.

Evasion of Obligations by Road Hauliers

Competition with goods road transport has, with the reduction in the total available traffic, become more acute, and has been combated by means of improved facilities and also by reductions in rates in all cases where such reductions are estimated to improve the net revenue position. Although the Road Haulage Wages Act, 1938, is now on the statute book, its provisions are far from being fully effective, and the low wages still paid in sections of the road haulage industry enable unduly low rates to be charged which lead to further depletion of railway traffics. Apart from the necessity of making the road haulage wages provisions fully effective, the railway companies attach great importance to the necessity for securing due observance of the conditions attached to goods road licences, such as limits of speed and weight, hours of duty of drivers, and the requirement to keep journey records. Many of the licensing authorities have expressed concern as to the extent to which the law is disregarded, and the whole question was in July, 1938, referred by the Minister of Transport to the Transport Advisory Council, and is receiving consideration by that body. The railway companies will have an opportunity of putting forward their views and their proposals through their representatives on the council.

In July, 1937, the Transport Advisory Council submitted to the Minister a unanimous report recommending a system of control of road haulage rates. The railway companies were a party to this report and recognised it as a means of regulating the rates of their principal competitors. No legislative action has yet been taken on this report, and as none was foreshadowed in the King's Speech in November, 1938, and in view of the grave decline in railway revenue, the railway companies made urgent representations to the Minister of Transport asking that equality of conditions should be established by removing the statutory restrictions affecting their charges for merchandise traffic. At the same time the railway companies published their proposals, which have received a wide measure of sympathy and support from the general public. The Minister of Transport has referred the proposals to the Transport Advisory Council, and at the same time the railway companies have been conducting

separate discussions with the trading and other interests concerned. The companies believe that, given the same freedom from restriction in regard to rates as their competitors enjoy, they will be able to improve their position substantially, and they are continuing to press for early legislation to this end. A separate leaflet is being sent to all stockholders, showing the urgency for new legislation to give effect to the proposals of the railway companies, and explaining how stockholders can give active help in the campaign.

Holdings in Road Companies

At December 31, 1938, the company's total holding in the various omnibus companies, at cost, was £2,436,221, and on this sum the return for the year was at the rate of 14·22 per cent., all the associated companies having continued steadily to extend their business and improve their financial position. The greater part of the revenue of these companies is derived from their local services, many of which are not competitive with rail. A considerable measure of co-ordination between rail and road has been realised, resulting, on the financial side, in savings or additional revenue to the railway company estimated for the year under review at £109,000. The railway company's investment in companies carrying goods traffic by road amounted at the end of 1938 to £647,548, in addition to which there was £439,500 on loan to these companies. The greater part of the investment is in Carter Paterson & Co. Ltd., and in the Hay's Wharf Cartage Co. Ltd. (holding all the shares of Pickfords Limited), which companies in turn control a number of subsidiary undertakings. The return for 1938 to the London & North Eastern Railway on its total investment, including loans, was at the rate of 5·12 per cent.

The fall in rail carryings of freight has naturally been reflected in the tonnage carried by our own cartage fleet, which is engaged for the most part in the collection and delivery of railborne traffic; but the cost of operating the fleet has also been reduced during the year, numbers of obsolete vehicles having been replaced by up-to-date machines, with resultant economy. At the end of the year the motor vehicles numbered 3,767, further mechanisation schemes having been introduced with a view to effecting savings and increasing efficiency. Experiments have continued to be made with a view to finding a suitable lightweight motor for town traffic, whilst the possibility of utilising gas-producer and electric vehicles is being examined.

Marine Activities

Our steamship account, which shows a debit balance of £18,000, has, not unnaturally, been affected adversely by the tension in international politics. It is gratifying, in all the circumstances, to record that our Harwich services continue to give a substantial credit balance, and that the number of passengers carried has not fallen more than 9½ per cent. Owing to events in Central Europe, culminating in the crisis of last September, large numbers of individuals and parties who had booked to travel cancelled at the last moment. In October a well-appointed train, on the lines of the Coronation, was put into use between Liverpool Street and Harwich on the Hook of Holland service. The train has been highly praised by passengers, and has given a good impression to foreigners arriving in this country. Despite abnormal conditions, our week-end cruises from Harwich again had a successful season. The special equipment installed on the ss. *Vienna*, including showerbaths, was much appreciated. It is our intention to run a further series of cruises this year. Goods traffic fell 14 per cent. as compared with 1937, both imports and exports showing a decline; but some interesting new traffics have been developed by our Harwich/Zeebrugge train ferry, which has maintained its carryings to a remarkable extent. Cargo carryings by the Humber Continental Services also declined, but the operation of these services by Associated Humber Lines shows a considerable saving in working costs in comparison with the period before the sailings were jointly operated. The Clyde and Loch Lomond services proved popular with visitors to the Glasgow Exhibition. Our docks have been severely affected by the decline in coal exports, and the unsettled international outlook during the past year has not favoured overseas trade. Gross receipts accruing to the docks account fell, in comparison with 1937, by £329,000, and in spite of lower expenditure owing to the smaller volume of traffic, net receipts were £165,000 less than a year ago.

The net revenue from hotels was £132,000, a decrease of £33,000 on the 1937 figure. The fall in gross receipts was £13,000, while expenditure increased by £20,000 due mainly to the higher cost of wages. In 1937 there were a number of special functions in connection with the Coronation. The less favourable industrial position and disturbed political conditions in the latter part of the year adversely affected our hotel business as a whole. In the North Eastern Area, however, the net profit was a record for the area. The recently completed schemes of improvements have been appreciated by our customers. During the year the railway trade unions submitted to the companies extensive claims for increases in pay and conditions of service. These claims were opposed by the railway companies, and the applications have been referred to the Railway Staff National Tribunal whose decision is expected shortly. Negotiations are also proceeding in connection with an application for improvements in pay and conditions of service of Railway Workshops staff.

Sligo, Leitrim & Northern Counties Railway Company

The annual general meeting of the Sligo, Leitrim & Northern Counties Railway Company was held at Sligo on March 1, Captain George Hewson, Chairman of the company, presiding.

The Chairman, in moving the adoption of the report and accounts, said that he hoped the Governments of Southern and Northern Ireland would endeavour to put transport matters on a more sensible basis in Northern Ireland. Competition, where co-operation should exist, between the Transport Board and the railways had resulted in the board becoming apparently bankrupt, and in the railways finding it daily more difficult to make ends meet. Similar competition existed in Southern Ireland, but he hoped that the commission now sitting would be able to co-ordinate road and rail traffic, possibly by reducing the maximum weight of vehicles on the road and establishing a rate-fixing tribunal.

The report and accounts were adopted.

Londonderry & Lough Swilly Railway Company

The annual general meeting of the Londonderry & Lough Swilly Railway Company was held in Londonderry on March 1, Mr. I. J. T. Colquhoun, Chairman of the company, presiding.

The Chairman, in moving the adoption of the report, said that the gross receipts from the railway working, including rents, for 1938 amounted to £21,224, a decrease of £1,274 compared with the figure for 1937. Expenditure on railway working came to £25,297, a decrease of £476. The net result from railway working was a loss of £4,073, compared with £3,275 for 1937. Both Irish Governments had granted financial aid totalling £3,167. The settlement in April last year of the economic dispute between the British and Irish Governments had not so far been of much benefit, but the Chairman hoped it would lead to better things in the future. The gross total from road transport of £65,012 compared with £64,809 for 1937. Expenditure came to £62,401, as against £62,348. The credit balance left was £2,611, as against £2,461 the previous year.

The Chairman hoped that the report of the Transport Tribunal would provide a remedy for the activities of "pirate" carriers. He thought that the company, compared with most other railway companies, had maintained its position relatively well, though he feared that the closing, in the near future, of the Burtonport line was inevitable. The figures given in the accounts showed that the future of the company lay in the development of its road, rather than its rail, services. The report and accounts were unanimously adopted.

GREAT SOUTHERN RAILWAYS COMPANY

Worst year since amalgamation—Loss on working—Road competition—Rating re-valuation dispute—Electric colour-light signalling extended—Locomotive water from Royal Canal

The annual general meeting of the Great Southern Railways Company was held in the Gresham Hotel, Dublin, on March 3, Sir Walter Nugent, Chairman of the company, presiding.

The Chairman said: Ladies and gentlemen, the report of the year's working which you have before you is, I am sorry to say, a very disappointing one. For reasons which I will endeavour to analyse, the gross receipts of all our undertakings show a large decrease, and the net receipts a proportionately greater one; in fact it is no exaggeration to say that the year 1938 was from the financial point of view the worst we have experienced since the Irish Railways Amalgamation Act was passed. The gross receipts from the operation of all railway and road services and other businesses was £4,279,788—a decrease of £49,538 compared with 1937. The expenditure under the same heads was £3,964,642, an increase of £39,982 over 1937. The net receipts from these services was, therefore, £315,146, or £89,520 less than in 1937.

The total net income for the year, after the inclusion of miscellaneous receipts from rents, interest, &c., was £351,113, or £95,238 less than last year. To the total net income of £351,113 must be added £36,910 brought in from 1937, making total revenue resources of £388,023, from which there is deducted debenture and other interest, rentals, and fixed charges amounting to £394,124—compared with £366,321 in 1937—leaving a deficiency of £6,101; while in the previous year there was a surplus of £114,637, showing that the final result of 1938 is £120,738 worse than at the end of 1937. The deficiency, after payment of fixed charges, is made up of:—

	£
Loss on year's working (1938)	43,011
Reduced by the carry forward from the previous year (1937)	36,910
Dr.	6,101

An amount necessary to eliminate the deficiency has been transferred from a reserve, *viz.*, the fund of the compensation, received under the Irish Railways (Settlement of Claims) Act, 1921, and there is no balance to carry forward to next year's account.

This unsatisfactory result has been brought about by (1) road motor competition, (2) further increases in wages rates and cost of materials, (3) the substantial falling off in the beet acreage, and (4) general trade depression. The trade depression is world-wide and is the natural outcome of war, the fear of war and the locking up of what should be reproductive wealth in armaments.

Since the Anglo-Irish Agreement, with the important exception of the cattle trade, from which the disabilities were almost at once removed, trade has only shown a very slow tendency to improve because tariffs on both sides can only be modified when the Prices Commission has decided in the case of each commodity how the best interests of Eire are to be served.

Road motor competition continues unfairly to take traffic from the railway and its authorised road services, by an increasing number of infringements, evasions and subterfuges, which not only continue to render ineffective the intentions underlying the Road Transport Act, 1933, but which are undermining the whole stability of your undertaking. The fullest representations have been frequently made to the Government with regard to this unfair and unregulated competition which is carried on in defiance of the very law which was passed to complete, and make workable, the co-ordination of public road and rail services by legally authorised merchandise carrying companies. The Government has now set up a transport tribunal to report on all transport systems in Eire; railway, road, tramways, canals, &c., and while we believe that the Great Southern Railways Company must always remain the backbone of any national system, it is deemed wise not to make any public observations on the many sides of this important subject, while the tribunal is sitting. I can assure you, however, that the case of your company has been most ably and exhaustively prepared and submitted to the tribunal.

Last year I had to report that the cost of wages had increased by £64,394 in 1937 over 1936. Labour costs have further increased during 1938 by another £64,146. Although our financial position is as precarious as that of other Irish companies, the Wages Board has restored wages cuts to our staff—cuts which have been allowed to continue to apply to the Great Northern, and other Irish railway companies—with the result that an exceptional burden of about £100,000 a year has been placed on your company.

The beet traffic did not yield anything like the same revenue as last year, due to a general failure of the crop, caused chiefly by bad weather, and to less acreage. The falling off in this traffic resulted in our carrying by rail and road 147,416 tons less, resulting in a loss in receipts under this head of £31,713 compared with the previous year.

Quinquennial Re-Valuation for Rating Purposes

I should like to draw your attention to a note which appears at the foot of Account No. 18 on page 13 of the report, referring to a contingent asset consisting of an amount at present unascertainable, and which is dependent on the result of the company's appeal against the valuation of railway hereditaments. Under the Railways (Valuation for Rating) Act, 1931, it is the duty of the Commissioner of Valuation to revise the valuations of the railway companies in Eire every five years. This entails a complete revision of the valuation of the company's immovable property excluding that of subsidiary businesses such as hotels, road services, canals, docks, &c.

In accordance with the Statute the Commissioner of Valuation made his quinquennial valuation, but when this valuation was notified to the company it was found that the commissioner had not altered the aggregate figure. The directors were advised by their rating experts that owing to the fall in the net receipts of the company as compared with the preceding quinquennial period, the commissioner should be asked to reconsider his valuation, and an application accompanied by strong representations on behalf of the company was made to him for a substantial reduction, but after considerable negotiations with the company's officials he declined to alter his decision. Accordingly in the month of February, 1938, the company appealed to the Circuit Court against the valuation made by the commissioner.

As the appeal covered the whole of the company's undertaking and, therefore, referred to every rating area in Eire, it was necessary for the Minister for Justice to make an Order directing that the appeal should be heard and determined by such circuit judge as the Minister might appoint, and in the month of May, 1938, an Order was made by the Minister directing that the company's appeal should be heard in the Dublin Circuit Court by Judge Davitt. The Great Northern Railway Company (Ireland) also lodged a similar appeal in respect of its property, and this company's appeal and that of the Great Northern Company were listed for hearing by the Circuit Judge in the month of July last when both appeals were duly heard. On the advice given by our legal advisers and rating experts we had every reason to conclude that the company had a clear and equitable

claim for a substantial reduction in the valuation fixed by the Commissioner; a reduction which would lighten the exceedingly heavy burden of rates which the company has to bear.

Judgment in both appeals was reserved until February 3, 1939, on which date judgment was delivered in the case of the Great Northern Railway Company's appeal. The circuit judge indicated that he felt he had not sufficient material from which to evolve a proper valuation in accordance with the provisions of the Statute, and that unless it was desired at that stage to test the correctness of his conclusions by seeking the opinion of a higher court, he had no course open to him, but to adjourn the hearing for the production of further evidence, and that as these conclusions applied to both appeals he did not make up any judgment in the case of the Great Southern Company.

The company's legal advisers are now considering what further steps should be taken, and as the matter is *sub judice*, it would not be right or proper for me to make any further reference to the case at present. Should the determination of the appeal result in a reduction of the valuation placed by the commissioner on the company's property, the company will be entitled to obtain a refund in respect of rates overpaid during the past two years and which they have been obliged by law to pay pending the result of the appeal. If and when this contingent asset becomes available and the financial position of the company justifies such a course it is the intention of the directors to recommend the payment of dividends in respect of the year 1938 on the 4 per cent. guaranteed stock.

I will now deal with the departmental figures.

Railway Traffic Receipts

Railway traffic receipts show a total decrease of £34,300, of which £302 is due to passenger train traffic and £33,998 to goods train traffic. The year that has just closed was one of exceptional difficulty for railway companies generally, and this company did not escape the effects of the trade depression which prevailed almost throughout the whole of 1938. In the early weeks of the year it was confidently expected that an improvement over the previous year would take place, but the announcement of the proposal to initiate discussions between the British and Irish Governments with a view to the speedy termination or modification of the economic war, quickly changed the outlook and trade was reduced to a very low ebb. Naturally merchants were reluctant to enter into large commitments pending the outcome of the deliberations, and consequently the quantity of traffic offered for transport was reduced to the minimum. The livestock traffic suffered in particular, as at one period of the year our receipts under this head were £28,500 worse than in the corresponding period of 1937.

As a result of the negotiations, however, the livestock trade quickly improved, but not sufficiently to outweigh the lean time experienced in the early part of the year, and the receipts under this head showed an ultimate loss of £14,517 compared with 1937. The successful result of the negotiations gave great satisfaction to all classes of the community, but owing to the terms of the subsequent agreement, trading figures were distinctly slow in showing any marked upward trend, with the exception of the livestock, which showed a substantial improvement in the latter months of the year.

The new cement factories at Limerick and Drogheda, which commenced production in April, 1938, represented an outstanding achievement in the industrial revival. Hitherto most of the cement required in this country had to be imported, but it is expected that these two factories will be able to supply nearly all the home demand. This, however, does not mean any substantial additional revenue so far as this company is concerned, as previously we had the haulage from the various ports to destination. Notwithstanding this, however, any effort which makes for the further employment of our people, with its consequent circulation of money amongst the traders of our provincial towns, must be a source of gratification to all who are interested in the industrial revival of the country.

During the year 1938, the policy of extending our railhead services was actively pursued, until at present almost every village in the country has the advantage of a door-to-door service. A booklet of information giving particulars of these railhead services was issued and was greatly appreciated by the trading community.

The total number of passengers carried was 7,297,923—a decrease of 707,341 as compared with 1937, no doubt largely due to the growth in the number of privately-owned motor cars. Excursion traffic for the year shows a decrease of 35,081 passengers as compared with 1937, but the receipts from this traffic show a decrease of only £2,134. Receipts from excursions run in connection with Gaelic athletic events show a decrease of £593, due principally to the fact that the All-Ireland hurling final of 1938 (Dublin *v.* Waterford) played at Croke Park, proved to be less attractive than the 1937 final (Kilkenny *v.* Tipperary) played at Killarney. Organised excursions, *i.e.*, special trains promoted by confraternities, private firms, clubs, &c., show a decrease of 15,000 passengers and £3,019 in receipts. This is attributed to the fact that there were no events in 1938 to correspond with the Catholic Truth Congress in Killarney and pilgrimage from Limerick to Knock, in 1937, the combined receipts from which amounted to £3,130.

Passenger traffic generally was seriously affected by the very unseasonable weather which prevailed practically throughout the whole of last year, owing to which there was a falling off in the number of passengers availing of "sea breeze" excursions and travelling by special trains to race meetings. All-in tours, which were inaugurated in July, 1937, include return train fare to Killarney or Galway; drives at destination and two meals served on the train, at a cost of one guinea. These tours proved very attractive during the past year. Merchandise traffic shows an increase of £21,989 in receipts, partly due to the increase of 5 per cent. in rates since January 1, 1938. The increasing use of electricity, both for heating and cooking purposes, has undoubtedly led to a less demand for household coal, and this fact accounts for the decrease of £23,050 in receipts from coal, coke, and patent fuel.

Hotels Department

The receipts of the hotels department amounted to £131,077, showing a decrease of £5,546 as compared with 1937. Expenditure was reduced by £1,403 and the net receipts were £10,627, compared with £14,770 in 1937. During the summer months, weather conditions were far from satisfactory, from a tourist point of view, and at the latter end of the season a war scare resulted in the cancellation of the bookings of American and English visitors who had provisionally reserved accommodation at the hotels. The prices paid by the company for many of the commodities used in the department remain at a very high figure. Many improvements have been carried out in the hotels, and these have been paid for out of the gross receipts of hotels and kindred services.

Permanent Way Department

The total expenditure in the Chief Engineer's Department on permanent way and works (excluding maintenance of signals and telegraphs) was £481,286, compared with £477,528 for 1937—an increase of £3,758. During the year a total of 30 miles of track was relaid and in addition 20¼ miles of re-sleepering was carried out, compared with 37½ miles of relaying and 37½ miles of re-sleepering in 1937. An increase of £2,041 is recorded under the head of roads, bridges, and works. This was due to heavier expenditure for renewal of steel bridges.

Expenditure on the maintenance of stations and buildings amounted to £35,619—a reduction of £9,661 compared with 1937. The decrease is partly accounted for by the fact that during 1937 Westland Row station and roof were completely re-painted and renovated and certain improvements effected for the convenience of the travelling public.

Locomotive Department

A re-organisation in the Running Department has brought about gratifying results in the reduction of locomotive coal consumption of almost 1 lb. of coal per mile run, representing a reduction in expenditure of approximately £6,000 for

the year 1938. Work is proceeding on three new main-line passenger locomotives for the Dublin—Cork service, and 400 covered goods wagons. Further re-organisation in the method of repairing and construction of the company's omnibuses has taken place, which will still further increase the efficiency of the company's road services. During the year, 35 new omnibuses were put into service. Two additional two-coach Drumm-battery-operated trains are under construction for the Dublin—Bray suburban service. The total train miles worked during the year was 9,137,294.

Signal and Telegraph Department

The company's signalling, telegraphs, signal cabins, hydraulic machinery, cranes, and turntables, and also this department's shops and machinery, have been maintained in good working order and condition during the past year. Modern signalling methods, properly applied, have been found to be the source of substantial economies. A new central signal cabin with all-electric apparatus and colour-light signalling has been provided at Kingsbridge. This new cabin replaces four of the old cabins in the adjoining district which are now dispensed with resulting in a considerable saving of staff. When the work is completed, colour-light signalling will be in operation from Islandbridge to Dun Laoghaire throughout, thereby making available considerably improved traffic facilities with much safer and more expeditious handling of train movements.

The signal cabin buildings at Achill, Newport, and Mallaranny were disposed of, and the signalling and telegraph installations at each of these stations were recovered following the closing of the Westport—Achill branch. The signal cabins at Glanworth and Arva Road were dispensed with and ground frames substituted therefor. The opportunity was taken of carrying out signalling alterations in the course of yard relaying, with a view to effecting much needed improvements at the following stations:—

Durrow	Ashtown	Ballinasloe
Killiney	Manulla	Midleton

Automatically-controlled, electrically-driven pumps have been substituted for the steam-driven pumps at Tubbercurry and Collooney, thus enabling an economy in labour to be secured.

Stores Department

The year 1937 was remarkable for steep increases in the prices of all stores and materials. In 1938, prices of materials were still higher and entailed an increased cost of £26,000 compared with those ruling in the year 1937. In order to offset the increased cost of materials, the quantity of our purchases was drastically reduced. Materials valued at £1,071,000 were issued from our Stores Department during the year.

Scrap metals were a strong market early in the year, but prices slumped badly later, with the result that we sold 2,722 tons less and realised £15,000 less than in 1937. Forward buying of locomotive coal under a favourable contract saved us from the large increase ruling in this commodity. Our total consumption for the year was 238,000 tons—a decrease of 8,000 tons compared with the previous year. Two million six hundred thousand gallons of petrol and 109,000 gallons of diesel oil were used in our road vehicles during the year.

Road Transport

The popularity of bus travel still continues to increase. The omnibus receipts for the year 1938 show an increase over all the previous years. The number of passengers carried amounted to 25,742,778—an increase of 705,123 compared with 1937. The total figure of gross receipts was £629,212—an increase of £16,884 over 1937. These results of the year's working are considered satisfactory when the poor weather of the past summer is taken into account.

Experience has shown that there is an ever-increasing number of traders purchasing and using motor vehicles for the carriage of their own goods. Competition in this form is the most serious the company has had to face, particularly when it is realised that traders can operate their vehicles without any restriction as to distance, or class of traffic carried, and furthermore, can do so, without the expense of keeping vehicles in reserve to meet emergencies—to cope with the upward fluctuation of seasonal traffics, or for carrying unremunerative traffic—the railway company's vehicles being available, as a sort of reserve fleet, to be employed only as necessity or emergency requires.

The crisis with which the company is faced at present, in common with the railway companies in other countries, is attributable in great part to this form of competition, and undoubtedly some restriction in the use of privately owned commercial vehicles is imperative if efficient public transport services are to be maintained. Our receipts from road merchandise services during 1938 were £337,149.

As an additional item of interest I should mention that last year the Department of Defence sought and was provided with a fleet of motor vehicles for the purpose of army manœuvres, on terms satisfactory to both parties. It is anticipated that an increased fleet of motor vehicles will be required this year for the same purpose.

Royal Canal

It has been suggested to me that I should explain the item in our accounts referring to the Royal Canal on which there was a loss of £6,028 last year. The facts are as follow: The railway company is under a statutory obligation to keep the canal in a safe and navigable condition, and the Minister for Industry and Commerce has power to cause any work to be done which may appear to him to be indispensable for the preservation of the canal. Under Section 39 of the Act of 1818, the company cannot mortgage, demise, sell, or assign any portion of the canal property without the consent of the Minister for Industry and Commerce. All water for locomotive and other purposes at Longford station and stations between Mullingar and Dublin, including Mullingar, Enfield, Maynooth, Liffey Junction, Broadstone, North Wall, Amiens Street, Westland Row, and Grand Canal Street, is taken from the Royal Canal, and in the event of the canal being closed, the company would have to incur heavy capital expenditure for alternative water supplies.

I think I have now fully explored every branch of your company's business and tried to give you as well as I can some idea of the difficulties we have had to meet, as well as the reasons for the deplorable results which I have not attempted to minimise. As regards the future I regret to have to say that the outlook is extremely gloomy. It must be obvious to everyone that unless means can be found substantially to increase our gross receipts the net revenue will continue to fall short of meeting debenture interest and other fixed charges.

Before putting the resolution, I realise you would like me to express to the officers and staff of the company on your behalf, your recognition of their efforts, during a very trying year, to overcome the difficulties they have had to face. From the directors' point of view I can only say that we could not have been better supported.

The resolution was seconded, and, after considerable discussion, was declared carried,

Beira Railway Co. Ltd.

The ordinary general meeting of the Beira Railway Co. Ltd. was held at 2, London Wall, E.C., on February 14, Baron Emile B. d'Erlanger, Chairman of the company, presiding.

The Chairman, in moving the adoption of the report and accounts, said that increased expenditure had kept the gain in net revenue down to £414, although gross revenue was £63,869 higher. The operating ratio of 46·6 per cent. was still remarkably low for a railway working in these times. General merchandise was the principal traffic item of note, its increases of 109,719 tons and £116,945 in revenue indicating that trade conditions in Northern and Southern Rhodesia were well maintained during the year.

In view of the very satisfactory financial position, the company had been able to abolish as from January 1 the 5 per cent. to 10 per cent. surcharge on goods, according to

XUM

class, imposed in the financial crisis of 1932. It was estimated this reduction would cost the company £39,000 for the nine months of the current financial year it would be in force, but as the line was an integral part of the Rhodesia Railways system and depended on the two Rhodesias for nearly the whole of its traffic, a lowering of rates on traffic in which both companies were interested was manifestly to their advantage.

The total available balance for the year under review was £244,657, out of which the proposed dividend of 2s. a share less tax at 3s. 9d. in the pound would absorb £105,000. From the remainder it was intended to transfer £40,000 to dividend equalisation account, and carry forward £39,657 to the next account.

The report and accounts were unanimously adopted.

English Electric Co. Ltd.

Mr. G. H. Nelson, M.I.E.E., Chairman and Managing Director, presiding at the ordinary general meeting on February 21, of the English Electric Co. Ltd., said that the trading profit of the year at £667,603 was £115,418 more than that for the previous year. No profits on direct defence work arose in the company's 1938 operations, but it had naturally benefited by the additional demand for its normal manufactures which had been created by extensions in other industries associated with defence work. Far the greater part of the profits, however, were derived from the normal commercial demand for the company's manufactures. The net profit for the year was £501,709, and the present order book was the largest that the company had yet had. The demand for diesel engines continued, and the company received many favourable and appreciative comments on their reliability and low operating and maintenance costs. In the traction field large orders had been received from home and abroad for electrical equipments for operating on railway suburban lines, electric locomotives, and also for electrical apparatus for the operation of trolleybuses. The company had also received substantial orders for rolling stock, railcars, shunting locomotives, and bus bodies. Large orders had been received during the year for mercury-arc rectifiers for railways and ordinary supply buses. The company had installed valuable apparatus for the manufacture and testing of this type of plant.

The report and accounts were unanimously adopted.

Westinghouse Brake & Signal Co. Ltd.

At the annual general meeting of the Westinghouse Brake & Signal Co. Ltd. held at Winchester House, Old Broad Street, E.C., on February 14, Mr. H. G. Brown (Deputy Chairman), who presided, in the absence of Lord Southborough, owing to illness, said that the Polish brake contract was being carried towards completion with entire satisfaction to all concerned. More than 86 per cent. of the deliveries had been made. The last of these, from England, was due for shipment in April, 1839, and the whole contract was dated for completion in April, 1940. The company desired to express its thanks to the Polish State Railways for the manner in which they had carried out their part of this important contract, and for the promptitude with which they had met every financial obligation. With regard to the Lithuanian brake contract, the company had completed 67 per cent. of the total deliveries, and for all of them payments had been received in cash. The company had every reason to be satisfied with the manner in which this contract was being honoured by the Lithuanian State Railways. Regarding export trade, the company's representative travelled in almost all parts of the world. In some cases, however, it was found impossible to meet the requirements regarding credit facilities which were demanded in certain countries. It was encouraging, therefore, to note that a Bill was now before Parliament providing for a considerable increase in the scope and facilities which could be granted by the Export Credits Guarantee Department.

The report and accounts were unanimously adopted.

Associated Road Operators' Luncheon

Last Tuesday, the opportunity was afforded by a luncheon at Grosvenor House, London, under the auspices of the Executive Committee and the National Haulier Sectional Board of Associated Road Operators Limited, for spokesmen of road and rail interests to describe the recent steps taken towards establishing a measure of co-ordination of transport. In addition to many prominent leaders of the road haulage industry, the following were among those representing the railways :—

Lord Stamp, Sir Ralph Wedgwood, Sir William V. Wood, Messrs. C. H. Newton, J. B. Elliot, E. J. Missenden, A. E. Sewell, H. W. Payne, D. C. K. McCulloch, and G. Cole Deacon.

Mr. Roger W. Sewill, National Director of A.R.O. Limited, in proposing the toast of "Success to Road and Rail," coupled with the name of Lord Stamp, referred to the Central Consultative Committee of road and rail, which was about to be set up principally to expedite rates agreements, and which was indicative of their determination to get down to business. Both sides had already had some experience of working together, and in confirmation he cited the negotiations, started in July, 1938, between the A.R.O. and the Great Western Railway in connection with certain traffics on the South Wales route. Road and rail realised that a rates war led only to the bankruptcy court and involved less and less efficient service and progressively worse conditions for employees, apart from the shareholders; the country demanded the greatest possible efficiency in transport, but he felt that transport, in its turn, was entitled to earn a fair return for labour expended. There was, naturally, opposition to the "gentlemen's agreement" effected by the two industries, but he would like to mention the significant fact that it had had unanimous support from road hauliers as a whole. In conclusion, he considered that this pact, which they were fully prepared to honour in the letter as well as the spirit, was one of the greatest achievements in the realms of transport, and one, moreover, which meant the beginning of better times for their own industry and for the railways.

Lord Stamp, in his reply, said that the new agreement, notwithstanding certain inferences to the contrary, was not inconsistent with recommendations made by the Transport Advisory Council in 1937. From the point of view of the trader, the agreement should be a welcome development, in that it offered him the prospect of a better organised system of public transport, as well as the right to appear before a tribunal and lodge objections as regards both road and rail rates. To find the true equilibrium between the two forms of transport so as to provide (*a*) the optimum service to the user with the minimum total cost in resources, and (*b*) an economic return for each side, was a real problem and one which had to be solved in the middle of carrying on practical affairs; he felt sure that they were providing for the first time some of the conditions of a great rational attack upon the problem. Turning to the methods of coping with similar transport difficulties abroad, Lord Stamp said that the French solution was the virtual product of State ownership of one form, but that the American campaign, styled (by way of compliment to us, no doubt) the "Square Deal," was, from the very wording of a recent leaflet on the railroads' programme, nearer in its essentials to our own. In conclusion, he expressed appreciation of the work done by the Liaison Committee on Road Transport Rates, coupled with the name of Mr. W. Edwards, and he hoped that the committee in question would remain in being as the authentic mouthpiece of the road haulage industry.

Mr. Edwards briefly thanked Lord Stamp, and gave the assurance that every endeavour would be made to advance the road and rail agreement to its ultimate objective.

MINISTRY OF TRANSPORT ACCIDENT REPORT

Wishaw South, L.M.S.R., August 4, 1938

Lt.-Colonel E. Woodhouse was the Inspecting Officer who enquired into the two collisions which occurred near Glasgow on August 4, 1938, the first at about 4.3 p.m., when the 10.25 a.m. special freight train, Carlisle to Newton, consisting of 45 wagons and a 20-ton van, gross trailing weight 550 tons, drawn by Class "2P" 4-4-0 engine No. 14357, overran signals on a falling gradient of 1 in 102 near Pather signal box and collided at about 20 m.p.h. with the rear of the 4.5 p.m. Wishaw South to Glasgow passenger train, waiting to leave the former station. This train consisted of five bogie coaches, drawn by 0-6-0 engine No. 17594, tender first. The engine had steam brake and a vacuum ejector for working the train brakes but no automatic combination valve, and the impact caused it to break away, the severe snatch parting its front coupling. The fireman was absent from the footplate and driver Simpson, who hearing warning shouts had just started the engine, was thrown off and stunned. The engine gathered speed, and after running about 3½ miles down falling gradients, overtook at about 50-55 m.p.h. the 4.5 p.m. passenger train, Motherwell to Glasgow, itself running at about 25 m.p.h. The last named train was composed of five bogie coaches, drawn by 0-6-0 engine No. 17395. There was nobody in the first passenger train, but the second collision partly wrecked the last coach of the other train. A guard was killed and an assistant guard injured, and two passengers complained of shock. There was no derailment, the runaway locomotive travelling over 300 yd. jammed in the last coach of the Motherwell train. The weather was fine and the rails dry.

The line in the vicinity falls continuously for about 16 miles from a summit near Craigenhill, through Law Junction, Wishaw and Motherwell. From Law Junction to Motherwell colliery, inclusive, there are 13 signal boxes, many of them not half a mile apart, the shortest distance being 484 yd. There are facing connections to goods loops at four places beyond the scene of the first collison, to branch lines at two places—to two branches at one of them—and to a locomotive depot at one place. At Wishaw South and Pather the signalmen have a good view along the line.

The engine load tables make a distinction between "through freight" and "mineral" trains, including a lengthy list of equivalents, in terms of "10 ton wagons of mineral" for various wagons and classes of load, laying down that two wagons of "mineral" are to be reckoned as 3½ of "goods." A general "goods" load of 43 "wagons" is given for a through freight train drawn by a "2P" engine. This is reduced over certain steeply graded sections, but Law Junction to Motherwell is not one of them. It is one, however, on which a special stop to pin down wagon brakes may be made, if desirable. The mineral train loading for the same engine and section is given as 42 wagons. The train in question consisted of 47 wagons, two of which were detached at Beattock, making an equivalent tabular load of 50¼ wagons (goods) or 41½ (mineral) at Law Junction. At Carlisle Guard Cameron, adopting simpler methods of calculation, told Yard Inspector Pearson that he had "equal to 45," and the latter, thinking the engine was of the more powerful "3 P" class, said the train must run as it stood; Cameron made no objection. Driver W. White was well acquainted with the line and freight train driving. His engine had Westinghouse brake on coupled and tender wheels, available brake block pressure being 32 tons. The van could exert an estimated 15 tons. White said the brakes were in good order and he had no difficulty in controlling the train down a 1 in 150 gradient and stopping at the foot of it. He had never had to stop to pin down brakes descending from Craigenhill to Motherwell but would have done so had he felt any doubts. On finding Pather distant signal "on" he applied the Westinghouse brake fully and the engine wheels did not skid. Not slowing up as he expected he applied sand and reversed, whistling for the guard's brake. Speed had fallen to 10-15 m.p.h. at the moment of collision. His fireman confirmed this.

Guard Cameron did so also. There having been no difficulty in controlling the train, he was not surprised that White did not stop to pin down brakes. He applied his hand brake, using the brake stick, on seeing Pather distant signal, and the wheels of his van did not skid. He estimated the speed on colliding as 15 to 20 m.p.h. The signalman at Pather box, realising the train could not stop, and estimating its speed at 15 to 20 m.p.h., sent the necessary signal to Wishaw South.

Signalman McGlinn, Wishaw South, on receiving the "Running away" signal had not yet offered the passenger train forward. He went to the window and whistled to Driver Simpson, and when the engine broke away signalled it forward, but did not bell it as running away, as he thought Simpson was on the engine and would stop later in section. (He could, however, have seen that the footplate was empty). He did not inform Control at once, but tried to do so when he learnt the engine was unattended. The telephone lines were then very busy. Signalman McLaughlin, at the next box, Wishaw Iron Works, realised there was nobody on the engine, which passed at 40 to 50 m.p.h. He telephoned to the next box, Shieldmuir Junction, to that effect, the engine reaching there too late for Signalman Grierson to do anything but pass on the "Running away" signal and telephone to Control. The same thing occurred at the next box, Shields Colliery. At the next, Flemington, the signalman, not aware that the engine was unattended, showed a red flag. At the next, Dalzell Works, the signalman, on hearing the state of affairs, tried to shift loop points to divert or derail the engine but was too late. News did not reach Control in time to prevent the 4.5 p.m. from Motherwell being held back clear of the main line, and the escaping engine reached Lesmahagow Junction, passing two boxes at Motherwell, without there being time to do anything effective. The Motherwell Colliery signalman saw it coming and it collided with the passenger train outside his box. The men on that train had no warning of its approach.

Inspecting Officer's Conclusions

Experiencing no difficulty in stopping at Strawfrank Junction, on a less severe gradient, seems to have made driver White over-confident of his ability to control the train without braking some of the wagons. The damage suggests that he was exceeding his estimate of 20-25 m.p.h. at Pather distant signal. Responsibility for the initial collision must be borne by him. He is 49, and has had 17 years driving, and a fair record. The guard did what he could, but had he more correctly informed White of the load at Carlisle, the latter might have stopped for some brakes to be pinned down; the proper calculation of loads is a matter of some difficulty. Nor is the apparent overloading of the engine regarded as important. Load tables are drawn up more with regard to hauling capacity than braking effect, and the load of the train was, in mineral units, within the rated capacity of a Class "2P" engine over this section of line.

Had engine No. 17594 been fitted with a combination steam and vacuum valve it would probably have stopped under the steam brake when it broke loose, even with regulator open. The absence of this equipment was one of the causes of the second collision. It is difficult to understand how Signalman McGlinn failed to notice there was nobody on this engine; there was nothing to prevent his doing so. His signalling it forward in the normal manner prevented the taking of effective emergency measures, as the signals being lowered at the next two boxes impeded prompt movement of facing points. McGlinn, a man of 30, with nine years as signalman and a

good record, must bear considerable responsibility for the second collision. The runaway passed the remaining signal boxes so soon after warning of it arrived that there was no time to take preventive action there.

Remarks and Recommendations

Though Guard Cameron's mistake in computing the load of his train contributed to the first collision in only a minor degree, if at all, it draws attention to the complexity of the table of equivalents used for the purpose. A 10-ton wagon of mineral is the unit employed, and the loading tables include a lengthy list of equivalents for evaluating other types of wagon in terms of it. Accuracy in their application cannot be an easy matter, especially in the circumstances in which a guard has to use them; the company should consider whether they cannot be simplified.

It has now been decided to fit combination steam-vacuum brake valves on some 70 ex-Caledonian 0-6-0 engines hitherto unfitted, and as they are frequently used on passenger trains this should be done as soon as practicable.

Had the signalmen north of Shieldmuir Junction had a little longer notice of the runaway and known it was unattended they would have been able to divert it to the goods loop or a branch, or even derail it by moving facing points under it. The "Running away" signal was doubtless passed on promptly, but probably a signalman's first thought on receiving it is to endeavour to stop the runaway by hand signal or detonators, useless with nobody in charge of it. Unless he knows, however, that there are no passengers or trainmen to be endangered he may hesitate to take the more drastic action, such as derailment, necessary with an unattended engine or vehicles broken away during shunting. Time needed to amplify the "running away" bell signal (4-5-5) by telephone may make all the difference between success and failure. The advisability of introducing a separate "*Unattended* vehicles running away on right line" bell signal is recommended for consideration.

L.N.E.R. Pacific Named "Sir Ralph Wedgwood"

Sir Ronald Matthews, Chairman of the L.N.E.R., unveiled at Marylebone station, on Friday last, in the presence of a large number of directors and principal officers of the company, the nameplates of the L.N.E.R. streamlined Pacific locomotive No. 4469, which, to mark the occasion of the retirement that day of the company's Chief General Manager, had been specially named *Sir Ralph Wedgwood*.

Among those also present on this occasion were the following directors of the L.N.E.R. :—

Sir Murrough J. Wilson, Lord Balfour of Burleigh, Sir Charles Coupar Barrie, Mr. Arthur H. Bibby, Lord Burghley, Major W. H. Carver the Hon. Geoffrey Cokayne Gibbs, Mr. Alexander Reith Gray, Mr. Geoffrey Herbert Kitson, Mr. Andrew Kirkwood McCosh, Lt.-Colonel the Hon. Arthur C. Murray, Sir Christopher T. Needham, the Rt. Hon. Viscount Ridley, Sir Gerald Francis Talbot, Mr. Walter Kennedy Whigham.

The undermentioned officers of the company and others were also present:—

Mr. C. H. Newton, Sir Nigel Gresley, Colonel H. H. Mauldin, Messrs. C. Dandridge, A. L. Gibson, V. M. Barrington Ward, A. P. Ross, O. H. Corble, O. Bulleid, D. J. Dowsett, W. H. Johnson, E. Thompson, Sir William Thomson, Messrs. I. B. Pritchard, W. H. Hanscombe, Sir Francis Dunnell, Messrs. G. Sutherland, G. A. Musgrave, and J. A. Kay.

Sir Ronald Matthews, in his tribute to Sir Ralph Wedgwood, said that ever since the L.N.E.R. came into being he had carried the almost intolerable burden of the chief general managership, and in such a way that throughout the whole period he had been the outstanding figure in the British railway world. One could not imagine anything more suitable, as typifying the activity of spirit and strength of character he had always displayed than that he should have named after him one of their great locomotive engines. It was even more appropriate because the Pacific engines came into existence, through the genius of Sir Nigel Gresley, to haul those high-speed trains for the inception of which Sir Ralph was almost entirely responsible and which had so raised the prestige of the company. Sir Ronald, amid enthusiastic applause, then unveiled the nameplates of the engine.

Sir Ralph Wedgwood, in reply, recalled that ever since he was five years old it had been his ambition to see his name on a railway engine. Now after sixty short years, that ambition had been fulfilled. He could only say that, unlike most ambitions, it was even better in reality than in prospect. To the praise the chairman had given him he could not respond adequately, except by saying that his "almost intolerable burden" had been made tolerable—in many ways delightful—because of the co-operation of the staff and the kindness of the board, of Mr. William Whitelaw, and of the present Chairman.

Speaking of the naming of locomotives, Sir Ralph considered it a great art. They had some with personal names, *William Whitelaw*, for instance, and a few others. For the most part they had tried a wider and less personal appeal. *Cock-o'-the-North* was thought of by Sir Nigel Gresley, the company's Chief Mechanical Engineer, whose own name was carried by the 100th Pacific engine of his design. *Sir Ralph Wedgwood* was the 115th. For some time, Sir Ralph said, the L.N.E.R. used the names of Derby winners, starting well back in history and working forward through the years. They had to stop when, after naming 70 engines, they found themselves at the present day, though if it could have been carried a little further the series would have been the most popular ever known! A general manager, well coached, would perhaps name yesterday's winner, but not even a chief mechanical engineer could spot the winner of tomorrow.

Afterwards, the company turned from the stud book to the hunting-field, and then to the names of football teams. Their team engines became almost too popular—when Sunderland, for instance, came up to London for the cup-tie, nothing would satisfy their supporters but that the engine named after the team should haul their train. Sometimes that did not suit the company's roster, so the Devil inspired somebody to invent the interchangeable nameplate—an unpardonable fraud that struck at the root of all romance. Though it might be termed treason and ingratitude he had an uncomfortable feeling that perhaps the nameplate before him might be fixed with emergency screws or bear a different title on the reverse.

Having expressed his thanks, Sir Ralph Wedgwood climbed into the cab of the blue and silver locomotive, sounded the whistle, and ran the engine and tender to the far end of the platform and back, amid cheers from the company. Lady Wedgwood also entered the cab and took a turn with the whistle.

Forthcoming Events

Mar. 10 (*Fri.*).—Institute of Transport (Manchester-Liverpool), at Queen's Hotel, Manchester, 6.30 p.m. "Recent Legal Decisions Affecting Transport," by Mr. J. Thomas.

Institute of Transport (Newcastle), at Royal Station Hotel, 8 p.m. "The Ancillary Services of the Railway Companies," by Mr. M. Sifton.

Institution of Civil Engineers, Great George Street, London, S.W.1, 7 p.m. "Factors Contributing to Comfort in Travel": Section I: "By Road," by Mr. Sidney E. Garcke, M.I.Mech.E. Section II: "By Rail," by the Rt. Hon. Lord Stamp, G.C.B. Section III: "By Air," by Capt. E. W. Percival, M.R.Ae.S.

Mar. 11 (*Sat.*).—L.N.E.R. Musical Society, at Usher Hall, Edinburgh, 7.15 p.m. Concert.

Mar. 12 (*Sun.*).—L.N.E.R. Musical Society, at York Minster, 2.30 p.m. Music Service.

Mar. 13 (*Mon.*).—Institute of Transport (London), at Inst. of Electrical Engineers, Savoy Plaze, W.C.2, 5.30 p.m. "The London Passenger Transport Board, 1933-38," by Mr. Frank Pick.

Stephenson Locomotive Society (London), at Dining Club, King's Cross Station, L.N.E.R., 6.30 p.m. "The Locomotives of Dugald Drummond," by Mr. K. Nichols.

Mar. 14 (*Tues.*).—Institute of Transport (Birmingham), at Queen's Hotel, 6 p.m. Visit of the President. "Air Transport—Some Problems and Solutions," by Mr. G. Waters.

Mar. 15 (*Wed.*).—Institute of Transport (East Midlands). Visit of the President. Dinner.

Mar. 16 (*Thurs.*).—G.W.R., at Queen's Hall, Langham Place, London, W.1, 7.45 p.m. Smoking Concert. Concert Version of "Tom Jones."

G.W.R. (London) Lecture and Debating Society, in General Meeting Room, Paddington Station, 5.45 p.m. Annual General Meeting.

Mar. 17 (*Fri.*).—Institute of Transport (East Midlands), at Guildhall, Nottingham, 7 p.m. "The Development of the Diesel Railcar," by Mr. C. Cleaver.

Permanent Way Institution (Hull), at Lecture Hall, Paragon Station, 7 p.m. "Some of the Problems of a Dock Engineer," by Mr. T. Burdess.

Superannuation in Western Australia

Under a Superannuation Act of 1871, all officers serving in an established capacity in the Western Australian Government service, including the Government Railways, were granted pension rights on retirement, the pension being based on one-sixtieth of the average salary for the three years preceding retirement for each year of service, with a maximum of forty-sixtieths or two-thirds of such average salary. With the proclamation on April 17, 1905, of the Public Service Act, 1904, however, all entrants to the Government service after that date were excluded from the provisions of the Superannuation Act, and as a result only those fortunate enough to have been in the service prior to April, 1905, receive pensions, while those who joined since have received no superannuation or pension rights whatever.

It has long been recognised that persons who have spent a lifetime in the service should not be forced to retire without some provision having been made for their old age, and during the last session of Parliament, an Act was passed providing for a contributory superannuation scheme, applicable to all permanent employees, salaried and wages, as a result of which employees and the Government will contribute in equal proportions. The size of the pension, which will be payable on retirement at 65 years of age or on account of ill health, will be governed by the number of units taken out. A unit is £26 a year, or 10s. a week, and the number of units a person may contribute for depends upon salary received. Provision is also made for the dependents of a deceased employee.

The scale of pensions dependent upon salary is as follows: Where salary does not exceed £130 p.a., the pension is two units or £52 p.a. Where salary exceeds £130 p.a. but does not exceed £156 p.a., the pension is 2½ units, or £65 p.a. For salaries over £156 p.a. and not exceeding £208, the corresponding pension is 3 units, or £78 p.a. Thereafter for every additional £52 p.a. salary, an extra unit, or £26 p.a., pension is payable up to a maximum of 12 units, or £6 a week.

The rate of contributions payable varies according to age, but all persons over the age of 30 at the coming into force of the Act will receive a concession by coming under age 30 rate for the first four units, equivalent to a payment of 8s. 5d. a fortnight for a pension of £2 a week. There is no compulsion on any employee to join the scheme, but employees desiring to participate must join within six months of the Act coming into force or, in the case of new entrants to the service, within six months of their engagement. It is expected that the scheme will come into operation in September next. It is the first step in solving the superannuation problem, and should insure that all railwaymen and their dependents are provided for on retirement.

Co-ordination of Transport in Argentina

The co-ordination of transport schemes affecting the Argentine Republic, on which so many hopes have been founded, seems doomed to disappoint. In connection with the Bill relating to the City of Buenos Aires, an impasse has apparently been reached in the matter of raising the ready cash required to set the wheels in motion; whilst the national scheme, affecting the whole country, in which the railways are chiefly interested, will again suffer considerable delay. The Government, through the Ministry of Public Works, has just sent a message to Congress (not due to assemble until May next), proposing that the Co-ordination Board should be allowed a period of two years from the date of its constitution for drawing up the Bill, to be submitted to Congress establishing rules and regulations for the road transport concerns included in the co-ordination scheme. The original Bill was sanctioned two years ago, but 18 months elapsed from the date of promulgation until the board came into existence, the only development since then being this proposal to delay the presentation of the regulating Bill for another 18 months. It is all very disappointing for the railways, and particularly so for those who represent them before the authorities. Although co-ordination is not likely to prove the panacea for all the ills affecting the foreign-owned railways in Argentina that some people think, it has long been a peg on which railway chairmen have hung hopes of better times to come, when addressing their dividendless stockholders, so that the latest developments are most disappointing. The alterations made in the national Bill before it was eventually sanctioned, reduced its usefulness from the point of view of the railways, and the delay in putting its provisions into effect now makes the position still more serious for them.

The fact of the matter is that the co-ordination Bills are most distasteful to the general public, so that the Government is forced to move warily in the matter, in order not to forfeit the popularity of the electorate. Meanwhile, the competitors of the railways enjoy all the privileges afforded them, without sharing the responsibilities or obligations which the railways have to bear and comply with. Little wonder, therefore, that even in years of big harvests and general prosperity, such as 1937, the share of the railways is anything but commensurate with their contribution towards that prosperity, and the benefits promised by the transport co-ordination schemes are still, unfortunately, a very long way off.

Meeting of Engineers' Guild

A meeting of the Engineers' Guild —an association of the engineering profession concerning itself with the status and interests of the engineer and thus supplementing but not competing with the existing engineering institutions—was held at the Caxton Hall, Westminster, on February 20.

The Chairman, Mr. Robert Chalmers, gave a *résumé* of the aims of the guild as set out in a booklet issued last November. The council included men of distinction in the engineering profession, who were members of several institutions and were serving on the councils of some of them, whilst some were young members of a single institution. The membership represented a large variety of interests.

The membership of the guild at the moment was mostly in the London area, though there were a number of members in the provinces, Scotland and various overseas countries. A London and District branch committee had been formed, the Honorary Secretary of which was Mr. W. A. M. Allan, of 155, Camden Road, N.W.1.

The Chairman of the Membership Committee (Mr. C. F. Bolton), referring to the reasons for the guild's existence, pointed out that it did not clash in any way with the existing institutions, and that it was needed because engineers had no adequate representation in relation to their vast public importance. It was impossible to think of any aspect of national life in which engineers did not play an important part, yet, as a body, they were dumb because they were not organised. Appealing for support he said it was no use expecting the guild council to work miracles without the backing of the whole profession.

Mr. Forbes Jackson, referring to Mr. Bolton's remarks, suggested that the institutions had rather deserted the engineers, and he thought the guild might achieve results more rapidly by galvanising into life the existing professional bodies, but Dr. P. Dunsheath (Member of Council) pointed out that the institutions were prevented by their charters and the Inland Revenue authorities from furthering the interests of their members. Their business was wholly the advancement of the technique and science of engineering.

XUM

STAFF AND LABOUR MATTERS

Railway Shopmen

The Industrial Court sat in London on March 2, to determine the claim of S. Pendrich, employed by the London & North Eastern Railway Company as a machinist, grade II, in the permanent way works of the Engineer's Department at Gateshead, for regrading as machinist, grade I. The question of his grading fell to be considered in the light of the provisions of note 3 to schedule "B" of Industrial Court Award No. 728 in regard to the grading of machinists, metal.

In support of the claim evidence was submitted by the National Union of Railwaymen in regard to the classes of machines upon which the workman concerned in the claim is employed and the nature of the work he is called upon to perform, and having regard thereto it was claimed that he is proper to be regarded as a general machinist working without special supervision any class of machine or range of machines of the same class and to be graded as a machinist, grade I.

Against the claim evidence was submitted by the company in regard to the nature of the work the workman concerned is called upon to perform and the machines he is required to operate, and it was contended that having regard thereto his present grading was in accordance with the provisions of note 3 to schedule "B" of Award No. 728.

The Court by Award No. 1,718, stated it was satisfied that, having regard to the nature of the work carried out on the machines which the workman concerned was called upon to operate, the claim for regrading had not been substantiated.

Engineering Wages

Negotiations between engineering employers and trade unions on the unions' "wages and conditions" claims were continued in London on February 28, but without decisive result. In the morning representatives of the Engineering & Allied Employers' National Federation met the Amalgamated Engineering Union and the National Union of Foundry Workers led by Mr. Little, President of the Amalgamated Engineering Union. In the afternoon the Engineering Joint Trades Movement, led by Mr. Mark Hodgson, Secretary of the Boilermakers' Society, met the employers. Commander Sir Charles W. Craven, President of the Employers' Federation, was in the chair at both conferences, and the proceedings took parallel courses.

It was agreed that only brief official accounts of the conferences should be made public, and these were as nearly as possible on identical terms. The first statement said that "Mr. Little on behalf of the unions replied to certain points which had been made by the director of the employers' federation, Sir Alexander Ramsay, at the previous conference. He also introduced in considerable detail further arguments and statistics in support of the unions' application. The employers pointed out that the submissions put forward were so comprehensive that they would require to be carefully examined, and it was agreed that for this purpose the conference should stand adjourned to a date to be agreed upon."

Employee's Right to Wages While Ill

The Court of Appeal on February 27 decided that an employee who receives sickness benefit under National Health Insurance is entitled also to be paid his wages under his contract of employment. The plaintiff's case was that while he was employed by the defendant as a salesman at £3 10s. a week on a weekly engagement he became ill on December 4, 1937. He was admitted to hospital and remained absent from his employment until March 26, 1938, when the defendant gave him one week's notice. His claim was for arrears of wages at £3 10s. a week for the 16 weeks from December 4, 1937, to March 26, 1938. By his defence the employer denied liability and pleaded that the contract of service between the plaintiff and himself was subject to the implied condition that it should be discharged in the event of the plaintiff's being unable to perform his services through incapacity. Alternatively, he pleaded that the contract was broken by the plaintiff's continued absence from work without his consent and that he (the defendant) was discharged from the contract by that absence.

The County Court Judge found as a fact that the plaintiff never received any wages during his absence, and was of opinion that when an employee was absent through sickness he was not entitled to wages in the absence of any express contract to that effect. He found that the contract continued during the plaintiff's illness and said that while there was no authority on the position of a workman under the National Health Insurance Act, 1936, he would be greatly surprised to hear that it was the general practice of employers to pay wages to employees during their absence through sickness while they were entitled to National Health insurance. The plaintiff having already drawn 18s. a week National Health insurance benefit during his absence, he was in effect, the County Court Judge said, claiming to be paid £4 8s. a week for the material period. The County Court Judge was of opinion that, the defendant having employed other persons to do the plaintiff's work in the latter's absence, it would be inequitable that in addition he should have to pay both contribution under the National Health Insurance Act and the plaintiff's wages. He held that the present case was as near as possible to Niblett *v.* Midland Railway Company and to the case where workmen's compensation had been paid to an employee. He accordingly dismissed the action.

The plaintiff appealed.

Lord Justice Scott, in giving judgment, said that the plaintiff's illness was obviously not a breach of his contract of service. The County Court Judge had decided the case not on the ground that the contract was wholly terminated but on the ground that, although it was not terminated, yet the right to wages was brought to an end by the plaintiff's absence from work. He decided that there was no such general right to wages as the plaintiff sought to uphold. There had been a long series of decisions making it clear that the common law of England did not recognise any such rule in contracts of service as the County Court Judge had suggested. On the contrary, the cases said quite clearly that, under a contract of service, irrespective of the question of length of notice provided by the contract, wages continued during sickness or incapacity from sickness to do the work contracted for until the contract was terminated by notice by the employer in accordance with its terms.

In his (his Lordship's) opinion, where a contract incorporated certain rules, as in Niblett *v.* Midland Railway Company, a term might be implied in the contract suspending the payment of wages during receipt by the workman of the benefits which those rules contemplated should take the place of wages. So, also, where under the Workmen's Compensation Acts a man received half his wages in the form of compensation, it was right to interpret that Act as suspending the right at common law to receipt of full wages during the period of incapacity.

It was argued for the respondent employer that that same principle should be applied where a servant was in receipt of benefit under the National Health Insurance Acts—in this case the Act of 1936. The benefits conferred by that Act and its predecessors were in the nature of additional benefits, the persons coming within their scope being mostly workmen. Those benefits were intended to be an addition to such other beneficial emoluments as a workman might have during his illness, and their object was to improve the workman's position by giving him medical assistance and all the various benefits which were available to improve the lot of the working man. Those benefits were in their nature irrespective of the amount of wages as determined by the workman's individual contract of service. There was absent, certainly from the Act of 1936, any such ground as

existed in the Workmen's Compensation Acts for supposing that Parliament intended by the Act of 1936, which conferred the benefits of health insurance, to take away from the workman any rights to wages which he might have.

The majority of persons employed in this country were on terms of a week's or, at any rate, a month's notice. Consequently, there was no need to protect employers against liability to go on paying wages, a liability which they could terminate at short notice. There was no reason for saying that the National Health Insurance Act was intended to modify the terms of contracts of service of those who came within its provisions. It was enough to express the decision of the Court in that negative manner.

The appeal was allowed with costs.

L.M.S.R. Liverpool Goods Manager's Staff Dinner

The annual dinner of the L.M.S.R. District Goods Manager's staff was held on February 17 at Liverpool, when a gathering of nearly 300 was present, including numerous representatives of Merseyside trade and shipping interests.

Mr. H. Hauxwell, the District Goods Manager, who was in the chair, extended a hearty welcome to the guests. He referred to the many good friends the L.M.S.R. had on Merseyside amongst the shipping and industrial community, and, thanking the staff for loyal assistance in the difficult times we were experiencing, said how pleased they were to have Mr. H. V. Mosley and Mr. T. E. Argile with them.

Mr. Wardle, of the Yeoward Line, proposed the toast of "The L.M.S. Railway Company." He opened on a reminiscent note, and went on to refer to the good relationship which existed between the L.M.S.R. and shipping and industrial circles. He said it was his view that the railways should be relieved of the various restrictions imposed upon them, and said that the railways were essential to the country, and before long he thought they would be working to capacity. The L.M.S.R. certainly had the good wishes of the industrial and shipping interests.

Mr. H. V. Mosley responded, and said that whilst appreciating the previous speaker's remarks, it was necessary the railways should have more support if they were to be kept in a state of efficiency and so be fully prepared to deal with anything at all times; they must be used to a greater extent by the traders.

Mr. T. E. Argile also spoke, and said how much pleasure he derived from being in his old district. He paid eloquent tribute to the enthusiasm of members of the staff, and felt sure it was their aim to co-operate in every way.

Institute of Transport Annual Dinner

The annual dinner and dance of the Institute of Transport were held at the Connaught Rooms, London, on Friday last, March 3. The chair was occupied by Mr. Gilbert S. Szlumper, C.B.E., General Manager, Southern Railway, and among those present were :—

Messrs. T. E. Argile, F. P. Arnold, A. W. Arthurton, M. F. Barnard, Major G. D. C. Beaver, Messrs. H. E. C. Beaver, A. Blizard, Lt.-Colonel P. M. Brooke-Hitching, Sir Leonard Browett, Dr. Leslie Burgin, Major F. Bustard, Messrs. A. E. Cannon, F. L. Castle, A. R. Cooper, Major H. E. Crawfurd, Major L. F. S. Dawes, Messrs. A. A. M. Durrant, J. B. Elliot, H. W. Elliott, G. Ellson, W. J. England, Evan Evans, W. S. Every, Sir Sam Fay, Messrs. Sidney E. Garcke, W. H. Gaunt, Robertson F. Gibb, Colonel Eric Gore-Browne, Messrs. P. E. R. Graefe, W. S. Graff-Baker, Sir John Graham, Mr. A. Winter Gray, Sir Arthur Griffith-Boscawen, Messrs. R. S. Griffiths, T. Graeme Haldane, Prof. H. M. Hallsworth, Messrs. A. H. Hawkins, S. R. Hobday, R. M. Holland-Martin, Norman Hulbert, Sir Cyril Hurcomb, Messrs. J. A. Kay, R. Kelso, Percy C. Kidney, L. H. Kirkness, D. R. Lamb, W. E. C. Lazenby, Charles E. Lee, Ernest F. Long, Brig.-Gen. Sir H. Osborne Mance, Colonel L. Manton, Messrs. E. J. Missenden, H. V. Mosley, Major C. J. Murfitt, Messrs. J. S. Nicholl, W. G. Pape, O. C. Power, P. R. Privett, Colonel A. S. Redman, Messrs. V. A. M. Robertson, A. T. V. Robinson, D. Ross-Johnson, H. Seydel, Lt.-Colonel Sir Francis Shelmerdine, Messrs. C. E. R. Sherrington, H. A. Short, Major R. A. B. Smith, Mr. W. T. C. Smith, Lord Stamp, Messrs. Gilbert S. Szlumper, T. E. Thomas, C. F. Watling, A. H. K. Weir, Sir William V. Wood, Mr. Frank Woodward.

The Rt. Hon. Leslie Burgin, Minister of Transport, proposing the toast of "The Institute of Transport," spoke of the vital importance of all branches of transport in a state of emergency, and stressed the necessity for a country which desired to be in a state of preparedness to undertake the recruitment and organisation of almost its entire economic resources. Transport connoted mobility, which was an essential feature in times of peace and vital in time of war. He paid a tribute to the value of the institute as the rallying point of the leading people engaged in all forms of transport, and welcomed the close co-operation between the institute and his own department.

Mr. Gilbert S. Szlumper, President of the institute, in responding, expressed his gratitude to the Ministry of Transport for tackling problems both manfully and fearlessly. While transport, he said, was all pervading, its charges formed but a very small part of the total cost of anything in our daily life. Transport was essential to all inasmuch as it made potential value realisable. Mr. Szlumper observed that the Institute of Transport has been in existence now for nearly 21 years, and that its remarkable progress was a tribute to the tact, energy, and industry of its Secretary, Mr. Winter Gray. The value of the institute was such that he looked forward to the day when no position of responsibility in any branch of the transport industry was filled by other than a member of the institute. Mr. Szlumper added that many persons felt that the recent campaign of the railway companies could best be termed a "squeal for a square deal" and interpreted the position as representing struggles of a form of transport which was in many respects obsolete. He hoped, however, that bitterness and enmity were disappearing, and for his part he foresaw co-ordination—he hoped in the near future—as a division of function.

Sir Cyril Hurcomb, Past President of the institute, proposed the toast of "Our Guests." Outstanding among the guests, he said, were three generations of ladies of the Szlumper family, namely, the President's mother, wife, and daughter. He quoted a remarkable instance in 1904 when Mr. Stephen Gladstone set out from Harwarden rectory and within a period of less than 24 hours walked in stages to Bangor, returned by train to Flint, and walked the final lap to the rectory. With only four hours' rest he covered on foot a distance of 63½ miles in 16½ hours. Fortunately for transport success, said Sir Cyril Hurcomb, the days of such sturdy pedestrianism were passed. Among other guests which he mentioned by name were Herr Seydel of the Reichsbahn; Sir Francis Shelmerdine as representing aviation; and Mr. Percy C. Kidner (President of the Institute of Automobile Engineers), Major H. E. Crawfurd (President of Associated Road Operators), and Major R. A. B. Smith (President-Elect of the Commercial Motor Users' Association), as representing road transport. Railways also, he said, were adequately represented, and he welcomed in particular the presence of Mr. Robert Holland-Martin, Chairman of the Southern Railway, and of Sir Ralph Wedgwood who that day had ceased to be Chief General Manager of the London & North Eastern Railway.

Mr. Robertson F. Gibb, Chairman of the Union-Castle Line, who the previous day had assumed the office of the President of the Chamber of Shipping of the United Kingdom, replied for the guests. As the President was General Manager of the Southern Railway, he thought it was of particular interest that the Union-Castle Line had maintained an uninterrupted connection with the port of Southampton since 1853. It was impossible, he said, at any transport gathering not to have in mind the "square deal" campaign of the British railway companies. One of the cleverest features of this was the simple straightforward slogan. The words "square deal" tripped as lightly off the tongue as "Guinness is good for you." In addition to effecting arrangements with coastwise shipping liner services, he felt there was also a need for the railways to reach an understanding with coastwise tramp shipping, the importance of which to British industry was very considerable even although often overlooked.

XUM

NOTES AND NEWS

The Last Gas-lit Coach on the Southern.—The last gas-lit passenger-carrying vehicles of the Southern Railway have been withdrawn during the past few months, and the whole of the company's passenger-carrying rolling stock is now electrically lit.

Fire at Mossend Goods Station, L.M.S.R.—An outbreak of fire in the early hours of February 25 gutted the offices of the L.M.S.R. at Mossend goods station, near Glasgow. The fire brigade managed to stop the fire from spreading to the adjoining goods sheds, but all the office equipment was destroyed.

Railway Convalescent Homes Dinner.—The spring dinner of the Railway Convalescent Homes will be held on Wednesday, March 29, at 6.15 p.m. for 6.45 p.m., in the Wharncliffe Rooms of the Hotel Great Central. Viscount Horne, Chairman of the G.W.R., will take the chair.

G.W.R. Halt for Bryncelynog.—A new halt at Bryncelynog, between Cwm Prysor and Llafar halt on the Bala—Blaenau Festiniog branch line, will be opened by the G.W.R. on Monday next, March 13. Certain branch line trains in each direction will call at the halt on weekdays, with additional services on Saturdays, and cheap bookings will be given to places in the surrounding districts.

The Matterhorn Cableway.—The second section of the cableway on the south side of the Matterhorn was opened by the Prince of Piedmont on March 4. It runs from Plan Maison (8,531 ft.) to the Plateau Rosa (10,990 ft.). The total length of the two sections is four miles, during which the train rises 4,430 ft. in 21 min. This cableway was referred to in our issues of September 17, 1937 (page 503), and February 24, 1939 (page 332).

Canadian National Earnings.—The December, 1938, gross earnings of the Canadian National Railways were $15,184,052, a decrease of $1,035,374. Operating expenses amounted to $14,154,512, with a decrease of $335,828, resulting in net earnings of $1,029,540, which were lower by $699,546. Aggregate gross earnings for the whole year 1938 amounted to $182,241,723, a decrease of $16,154,886, and the net earnings were $6,066,411, as compared with $17,607,750 for the whole year 1937.

Prestatyn Holiday Camp.—The latest holiday camp, which is being laid out at Prestatyn, North Wales, by a company controlled jointly by the L.M.S.R. and Thos. Cook & Son Ltd., will be opened on June 24. The camp, which covers a site of 58 acres adjacent to the sea, will have accommodation for from 1,500 to 1,700 people in nearly 900 chalets of three different types. These chalets, together with the reception, dining, recreation, and administrative quarters, will be permanent structures, and good progress is now being made with their construction. All materials used in the construction and equipment will be entirely British; the buildings have been designed by Mr. William H. Hamlyn, F.R.I.B.A., Chief Architect of the L.M.S.R.

B.S.S. for Steel Storage Bins and Racks.—The British Standards Institution has issued a new specification, B.S. 826, for steel storage bins and racks. Copies may be obtained from the British Standards Institution, 28, Victoria Street, S.W.1, price 2s. 2d. post free.

Attempted Trainwrecking in India.—An attempt at trainwrecking is reported from a station near Ludhiana, on the main line from Lahore to Saharanpur and Delhi, according to *The Times* Lahore correspondent. It is stated that the driver of a passenger train noticed, in time to avoid an accident, that rails had been removed from the track.

Railway Students' Association Dinner and Social.—A pleasantly informal gathering of members and friends of the Railway Students' Association was held at the G.W.R. Dining Club, Paddington station, on Friday last. The occasion was the first dinner and social to be held by this body (which is associated with the London School of Economics and Political Science), and the remarkable success of the venture well rewarded the energetic work of the organisers. Formal proceedings were kept down to a minimum, but short speeches were made by Mr. H. Bailey, Joint Hon. Secretary, proposing the toast of "The Chairman," and by Mr. L. W. Orchard in reply.

Staff Superannuation Schemes.—Speaking at the recent annual general meeting of the Provident Mutual Life Assurance Association, Mr. Owen Hugh Smith, the Chairman, referred to the fact that last year deferred annuities were issued by the association amounting to a total of nearly £50,000 per annum. Most of these were effected under staff superannuation schemes for the purpose of providing pensions for employees. The premiums under these contracts were usually paid jointly by the employers and employees. He regarded it as a sound and prudent practice to make provision for an employee's pension by instalments throughout the period of his active service, and it was mainly for this reason that deferred annuity contracts were becoming increasingly popular.

Railway Club Annual Meeting.—The annual general meeting of the Railway Club was held in London on February 16. After the formal business, the President, Mr. Kenneth Brown, delivered his presidential address entitled "More about Railways-in-Law." Mr. Kenneth Brown cited first a number of cases relating to horses being frightened by passing trains or engines, and then gave details of a case where a railway company was held to be liable to maintain works constructed by another company. Furthermore he mentioned two instances in which the Great North of Scotland Railway and the North Eastern Railway, respectively, were compelled to stop practically every train at a particular station. Among other cases the well-known lease by the Great Western Railway of the refreshment rooms at Swindon was recalled.

Buenos Aires Lacroze Light & Power Company.—Holders of the outstanding £244,000 6½ per cent. sterling redeemable mortgage debenture stock in this company are offered £87 10s. cash for each £100 of stock in full satisfaction, all interest arrears being cancelled. In a circular recommending acceptance of this offer, it is pointed out that the Lacroze Tramways Company, the largest consumer, has since May, 1937, paid nothing at all for power supplied. The Buenos Aires Transport Corporation took possession of the undertakings of the Tramways Company and the Buenos Aires Central Railroad & Terminal Company (known as the Lacroze Underground), on February 16, and the purchase price was paid in Transport Corporation ordinary stock, which cannot be realised or otherwise dealt with without the consent of the trustees for the Tramways debenture holders. Revenue from electric power supplied to the Terminal Company and to the Buenos Aires Central Railroad is about sufficient to pay the operating expenses.

Railway Communications in Spain Restored.—On February 7, or twelve days after the entry of the Nationalist troops into the city, rail communication may be said to have been re-established between Barcelona and Central Spain, and some 40 trains left for various destinations. The main line from Zaragoza, *via* Reus, was reopened for service as far as Prat de Llobregat, passengers continuing from that point by motorbus to the centre of the city. The big bridge over the estuary of the Llobregat, on the M.Z.A. main line, was totally wrecked and will take some time to repair. On the Northern Railway it is said that as many as 50 bridges and culverts have been wrecked between Lèrida and Barcelona. Co-operation between the military, the engineers of the Public Works Department, and the railways has contributed to the performance of what seem to be little short of miracles of rapid reconstruction, and the technique of destruction developed by the expert dynamitards of the retreating army has been followed by the advance in the methods evolved by the engineers engaged in the difficult work of repairs. Some of the reconstruction work will require more time. At Arriondas, for example, the under-water foundations of the bridges were mined, and the three bridges, road and rail, 60 m. high, at Igualada, were also destroyed from the foundations. The

damage to the viaduct at Port Bou must be described as wanton, as no military object was involved. In the railway workshops at Barcelona work is proceeding at full pitch in order to overhaul and place in service the rolling stock, said to number 300 locomotives and 4,500 wagons, left by the Republicans. It is understood that the properties of the Barcelona Traction Light & Power Company have been left in fair working order and the company's engineers have assumed control.

Two Railway Trust Companies Change their Names.—On Thursday, February 16, the ordinary general meetings were held of the Railway Debenture & General Trust Co. Ltd., and the Railway Share Trust & Agency Co. Ltd., both of which companies are under the chairmanship of Mr. Richard S. Guinness. The former company was incorporated on March 28, 1873, as the Railway Debenture Trust Co. Ltd. (name changed July, 1898), and the latter on December 12, 1888. Mr. Guinness called the attention of the shareholders to the fact that, when the companies were formed, railway expansion was to the fore all over the world, and railway investments were considered so attractive that they were likely to form the major portion of the investments selected by the directors. For many years past the companies have pursued the policy of steadily reducing the proportion of their holdings in railway securities, and on January 15 last the Railway Debenture & General Trust Company's investment list contained only 12 per cent. of railway investments. In the case of the Railway Share Trust & Agency Company, over 61 per cent. of its holdings at the time of its formation were in railway securities, whereas today only 7 per cent. of its invested funds is in prior securities of railway companies, and under 3 per cent. in railway ordinary stocks and shares. In consequence, both companies have dropped the word "railway" from their titles, and extraordinary general meetings, held on February 16, sanctioned the names of "Debenture & Capital Investment Trust Limited" and "Share & General Investment Trust Limited" respectively.

British and Irish Traffic Returns

GREAT BRITAIN	Totals for 9th Week			Totals to Date		
	1939	1938	Inc. or Dec.	1939	1938	Inc. or Dec.
L.M.S.R. (6,831½ mls.)	£	£	£	£	£	£
Passenger-train traffic...	401,000	405,000	– 4,000	3,425,000	3,505,000	– 80,000
Merchandise, &c. ...	464,000	494,000	– 30,000	3,827,000	4,332,000	– 505,000
Coal and coke ...	295,000	309,000	– 14,000	2,756,000	2,814,000	– 58,000
Goods-train traffic ...	759,000	803,000	– 44,000	6,583,000	7,146,000	– 563,000
Total receipts	1,160,000	1,208,000	– 48,000	10,008,000	10,651,000	– 643,000
L.N.E.R. (6,315 mls.)						
Passenger-train traffic...	264,000	268,000	– 4,000	2,278,000	2,325,000	– 47,000
Merchandise, &c. ...	345,000	367,000	– 22,000	2,655,000	3,069,000	– 414,000
Coal and coke ...	259,000	278,000	– 19,000	2,390,000	2,548,000	– 158,000
Goods-train traffic ...	604,000	645,000	– 41,000	5,045,000	5,617,000	– 572,000
Total receipts	868,000	913,000	– 45,000	7,323,000	7,942,000	– 619,000
G.W.R. (3,737¾ mls.)						
Passenger-train traffic...	167,000	168,000	– 1,000	1,451,000	1,465,000	– 14,000
Merchandise, &c. ...	201,000	210,000	– 9,000	1,635,000	1,776,000	– 141,000
Coal and coke ...	121,000	125,000	– 4,000	1,049,000	1,166,000	– 117,000
Goods-train traffic ...	322,000	335,000	– 13,000	2,684,000	2,942,000	– 258,000
Total receipts	489,000	503,000	– 14,000	4,135,000	4,407,000	– 272,000
S.R. (2,140 mls.)						
Passenger-train traffic...	268,000	263,000	+ 5,000	2,336,000	2,341,000	– 5,000
Merchandise, &c. ...	60,000	57,000	+ 3,000	492,000	529,500	– 37,500
Coal and coke ...	37,000	36,000	+ 1,000	337,000	346,500	– 9,500
Goods-train traffic ...	97,000	93,000	+ 4,000	829,000	876,000	– 47,000
Total receipts	365,000	356,000	+ 9,000	3,165,000	3,217,000	– 52,000
Liverpool Overhead ... (6½ mls.)	1,235	1,328	– 93	12,050	12,193	– 143
Mersey (4½ mls.) ...	4,498	4,339	+ 159	40,363	39,396	+ 967
*London Passenger Transport Board ...	569,800	572,100	– 2,300	20,399,200	20,193,500	+ 205,700
IRELAND						
Belfast & C.D. pass. (80 mls.)	1,604	1,648	– 44	14,984	14,879	+ 105
,, ,, goods	497	464	+ 33	3,801	3,890	– 89
,, ,, total	2,101	2,112	– 11	18,785	18,769	+ 16
Great Northern pass. (543 mls.)	9,050	8,400	+ 650	71,450	72,000	– 550
,, ,, goods	11,000	9,450	+ 1,550	83,700	75,200	+ 8,500
,, ,, total	20,050	17,850	+ 2,200	155,150	147,200	+ 7,950
Great Southern pass. (2,076 mls.)	28,994	30,363	– 1,369	246,870	250,568	– 3,698
,, ,, goods	41,570	41,661	– 91	362,332	372,974	– 10,642
,, ,, total	70,564	72,024	– 1,460	609,202	623,542	– 14,340

* 36th Week (before pooling)

British and Irish Railway Stocks and Shares

Stocks	Highest 1938	Lowest 1938	Prices Mar. 8, 1939	Prices Rise/Fall
G.W.R.				
Cons. Ord. ...	65¼	25¾	29½	+2
5% Con. Prefce....	118¾	74	84	+1
5% Red.Pref.(1950)	111¾	90	91	+3
4% Deb.	111	97½	99½	+1
4¼% Deb.... ...	112 5/16	100½	101	—
4½% Deb.... ...	118½	104	106	—
5% Deb.	131½	119	115½	—
2½% Deb.... ...	69¾	60	61½	—
5% Rt. Charge ...	129	114	110	—
5% Cons. Guar. ...	128½	103	105	+1
L.M.S.R.				
Ord.	30½	11	13¾	+¾
4% Prefce. (1923)	70¼	23	34½	+2½
4% Prefce. ...	82¼	43¾	55	+1½
5% Red.Pref.(1955)	103½	66	76½	+2
4% Deb.	105 15/16	85	93½	+3
5% Red.Deb.(1952)	114¼	105	106½	—
4% Guar. ...	102¾	77½	85½	+4
L.N.E.R.				
5% Pref. Ord. ...	8 9/16	3½	5	+½
Def. Ord.	4 7/16	2 1/16	2⅞	–⅛
4% First Prefce.	68¼	21	30	+1½
4% Second Prefce.	27¼	8	12½	+1½
5% Red.Pref.(1955)	97	40¼	47½	—
4% First Guar. ...	97½	66¼	71½	+3
4% Second Guar.	91¼	52	60½	+2
3% Deb.	79¼	60	66½	+2
4% Deb.	104⅛	77	86½	+2
5% Red.Deb.(1947)	110⅝	97	105½	—
4½% Sinking Fund Red. Deb.	108 11/16	101	102	—
SOUTHERN				
Pref. Ord. ...	87	47⅞	69	+3½
Def. Ord. ...	21¾	9¼	15½	+1½
5% Pref.	115	83	94½	+1
5% Red.Pref.(1964)	115½	98	97½	+2
5% Guar. Prefce.	128½	106	108½	—
5% Red.Guar.Pref. (1957)	116	109½	108½	—
4% Deb.	109¼	95	97½	—
5% Deb.	129	117	113½	—
4% Red. Deb. 1962–67	107	101½	100	—
BELFAST & C.D.				
Ord.	4	3½	4	—
FORTH BRIDGE				
4% Deb.	102	99⅛	96½	—
4% Guar. ...	103¼	94½	94	–1
G. NORTHERN (IRELAND)				
Ord.	5½	2½	3¼	—
G. SOUTHERN (IRELAND)				
Ord.	25½	8½	9⅞	–⅛
Prefce.	35	13	12¼	+¼
Guar.	70¼	30 15/32	30½	+½
Deb.	83	56	51	+¾
L.P.T.B.				
4½% "A" ...	119⅝	107½	112½	+1
5% "A" ...	130	117	120½	+1
4½% "T.F.A." ...	108	98	103	—
5% "B" ...	122 15/16	105	113½	+2
"C"	84	68	75½	+2½
MERSEY				
Ord.	24¼	16½	22	—
4% Perp. Deb. ..	102⅞	94¾	94½	—
3% Perp. Deb. ..	77	69	66½	—
3% Perp. Prefce.	66½	57	55	—

XUM

CONTRACTS AND TENDERS

Locomotives for the Federated Malay States

The North British Locomotive Co. Ltd., has received orders from the Crown Agents for the Colonies for eleven "01" class three-cylinder 4-6-2 tender locomotives and five two-cylinder 4-6-4 tank locomotives for the metre-gauge Federated Malay States Railways. Both classes will have 250 lb. per sq. in. boiler pressure and 4 ft. 6 in. coupled wheels. The tender engines will have cylinders 13 in. × 24 in. and the tank engines cylinders 14½ in. × 22 in.

The Rowhedge Ironworks Co. Ltd. has received an order from the Crown Agents for the Colonies for three 120-ton steel lighters for the Kenya & Uganda Railways and Harbours for service on Lake Kioga and two 100-ton steel lighters for service on Lake Victoria.

The American Locomotive Company has received an order from the Union Pacific Railroad Company for 15 locomotives, costing $2,400,000, states Reuters.

The South Indian Railway Administration has placed orders to the inspection of Messrs. Rendel, Palmer & Tritton with H. J. Skelton & Co. Ltd. for 82½ tons of dogspikes, and with Samuel Fox & Co. Ltd. for approximately 18 tons of spring steel.

Banting & Tresilian Limited has received an order from the Madras & Southern Mahratta Railway Administration for 2,600 steel boiler tubes to be supplied to the inspection of Messrs. Rendel, Palmer & Tritton.

The Tempered Spring Co. Ltd. has received an order from the Bombay, Baroda & Central India Railway Administration for 2,586 helical and volute springs to be supplied to the inspection of Messrs. Rendel, Palmer & Tritton.

Wm Beardmore & Co. Ltd. has received an order from the Bengal-Nagpur Railway Administration for the supply of 50 carriage and wagon axles.

Leyland Motors Limited has received an order from the East Kent Road Car Co. Ltd. for one single-deck diesel-engined passenger road vehicle.

Electric Locomotives Required for Australia

The State Electricity Commission of Victoria is calling for tenders (Specification No. 38-39/80) for the supply and delivery at the Electricity Commission's brown coal works at Yallourn, Victoria, of two electric locomotives of the central cab, bogie type with four axles: gauge of track 2 ft. 11 7/16 in. Tenders, endorsed "Tender for the supply of two electric locomotives to Specification No. 38-39/80," should reach the Secretary, State Electricity Commission of Victoria, 22-32, William Street, Melbourne, Victoria, Australia, by April 18. A copy of the specification and general conditions of contract, together with drawings, may be borrowed from the Department of Overseas Trade, London, S.W.1. Local representation is essential, and the D.O.T. is prepared to furnish firms desirous of tendering for the supply of locomotives of United Kingdom manufacture, and not represented in Australia, with the names of United Kingdom merchant houses with local connections who may be willing to handle tenders on their behalf.

British Tenders for Egyptian Locomotives

In response to the invitation for tenders for the supply of 16 2-6-0-type locomotives and tenders, the Egyptian State Railways Administration has received tenders from three British, one Polish, three Belgian, three German, one Swiss, and one Czech firms. The lowest tender, from Poland, is £7,050 a locomotive. The lowest British offer, at £9,850, is from the North British Locomotive Co. Ltd., states Reuters.

The Metropolitan-Vickers Electrical Co. Ltd. has received a part contract from the L.M.S.R., N.C.C. (Northern Ireland), for Cosmos electric lamps for a period of twelve months ending February 29, 1940.

From March 13 the head office and London works of Keith Blackman Limited will be at Mill Mead Road, Tottenham, London, N.17. The telephone number will be Tottenham 4522 and the telegraphic address "Keithblac, Phone, London."

RAILWAY AND OTHER REPORTS

Emu Bay Railway Co. Ltd.—The interest on the 4½ per cent. irredeemable debenture stock for the year 1938 and ½ per cent. on account of arrears will be paid on April 1.

Isle of Man Railway Company.—Gross receipts, including rents, &c., for the year 1938 amounted to £48,481, a decrease of £2,144 in comparison with 1937. Passenger train receipts amounted to £37,255, a decrease of £1,951, and merchandise and mineral receipts, at £9,582, were £631 lower. The total disbursements of £38,939 showed an increase of £53. During the year 729,471 passengers travelled on the railway, and 52,005 tons of merchandise and minerals were conveyed. Train-mileage was 241,960, against 244,520 in the previous year. The directors recommend a dividend of 1½ per cent. for the year on the paid-up ordinary share capital, leaving a balance of £2,154. Out of this they have transferred £1,000 to the reserve and renewal fund, and recommend that £1,154 be carried forward.

Bristol Tramways & Carriage Co. Ltd.—This company, which is controlled by the Western National Omnibus Co. Ltd., which in turn is jointly controlled by the Great Western Railway and the National Omnibus & Transport Co. Ltd., secured net profits for the year 1938 of £226,685, against £164,978 for the previous year. The final dividend is 6 per cent. (against 5 per cent.), making 10 per cent. for the year, as compared with 8 per cent. Reserve for contingencies and renewals is credited with £50,000, comparing with £15,000, and the amount carried forward is £23,163, against £21,509 brought in. In October, 1937, the shareholders received a special cash bonus of 25 per cent., free of tax. In accordance with the provisions of the Bristol Transport Act, 1937, and the agreement with the Bristol Corporation tramway services were discontinued on three routes in May last, and on a further five routes in September last. Services of buses were substituted and improved revenue has resulted. A further holding of shares in Bath Electric Tramways Limited, a subsidiary of the company, has been acquired. Three small bus businesses were acquired during the year and certain new properties purchased.

Manchester Ship Canal Company.—The report for the year 1938 shows a fall of 624,783 tons in seaborne traffic, and revenue fell by £101,914, and net receipts were £679,836, against £803,105. Net revenue for the year, after deducting interest and fixed charges and provision for reserves, amounted to £144,834, compared with £271,923 for 1937. The dividends paid are 3½ per cent. on the Manchester Ship Canal Corporation preference stock, 2 per cent. on the preference shares, and 1 per cent. on the ordinary shares, leaving £21,877 to be carried forward. For 1937 the dividend on the preference shares was 4 per cent., and on the ordinary shares 2 per cent.

Brown Bayley's Steel Works Limited.—An interim dividend of 5 per cent., tax free, is announced, the same as a year ago.

Lightalloys Limited.—An interim dividend of 15 per cent. was paid on February 28, comparing with 12½ per cent. a year ago.

British Automatic Co. Ltd.—A final dividend is announced of 4 per cent., tax free, for the year 1938, the same as for the previous year.

Hoffmann Manufacturing Co. Ltd.—A final dividend is announced for 1938 of 10 per cent., tax free, making 17½ per cent. net for the year. For the previous year 20 per cent. was paid tax free, but of this the 10 per cent. final payment was made on a capital increased by the 100 per cent. share bonus distributed in December, 1937.

OFFICIAL NOTICES

Crown Agents for the Colonies

COLONIAL GOVERNMENT APPOINTMENTS

APPLICATIONS from qualified candidates are invited for the following post :—

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V. CRASTER,
Secretary.

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Retired Railway Officers' Society Luncheon

Sir Arthur Salter was the principal guest at the luncheon of the Retired Railway Officers' Society, which was held at the Charing Cross Hotel on Thursday, March 9. Mr. J. Pike, President of the Society, was in the chair.

The following members and guests were present :—

Messrs. A. W. Arthurton, W. E. Bradbury, J. F. Bradford, F. S. Bridge, J. F. Brook, W. A. Brown, A. H. Bull, H. J. Burcham, H. R. Campfield, C. J. Challenger, E. A. Clear, W. J. Clayton, A. C. Cookson, A. F. Dymant, J. F. Gee, E. D. Grasett, H. J. Guest, E. B. Hassall, Lt.-Colonel W. H. Hall, Messrs. W. E. James, D. R. Lamb, J. F. Lean, J. W. Lovejoy, R. E. Maunsell, E. W. Mauger, W. A. Messer, A. S. Mills, S. L. Murgatroyd, Dr. Grant MacMahon, Lt.-Colonel Michod, Sir Charles Morgan, Messrs. R. H. Nicholls, A. Oldham, J. Pike, A. Puleston, W. H. Pyne, R. Rowbottom, F. Ruffell, F. A. Sargent, C. J. Selway, T. H. Shipley, J. E. L. Skelton, Procter Smith, G. S. Szlumper, Sir Arthur Salter, Messrs. W. A. Thomas, H. Thompson, Major W. E. Thornhill, Messrs. W. T. Venton, A. Walker, G. J. Walker, H. E. O. Wheeler, A. White, J. Williams, J. H. Woodhead, Sir William V. Wood, Lt.-Colonel J. S. Wilson.

Mr. Pike, in proposing the toast of the guests, said that it was the practice of the Society that members should invite old colleagues to the annual luncheons, and he was very pleased to extend a welcome to those present on this occasion. Their special guest, Sir Arthur Salter, needed no introduction ; 30 years ago, he had been Assistant Director of Transport at the Admiralty, and in 1932 he was chairman of the Road and Rail Conference ; at the present time he was chairman of the Railway Staff National Tribunal, and was, in addition, associated with a large number of commissions and conferences concerned with transport activities.

Sir Arthur Salter, in replying to the toast, made special reference to the road and rail agreement of 1932, saying that, had it not been for Government interference at that time, the "square deal" might easily have become a *fait accompli*. He had always regarded the railway industry as representing the most characteristic, as well as the most romantic, part of the business activities of this country ; other forms of conveyance—the aeroplane, the ship, the motor-car—had their uses, but he felt that railways were the real backbone of transport, that they inspired confidence, and that the British people would come back to them in time. He sincerely hoped that railways would emerge unscathed from their troubles, and that the "square deal" would really be a "square deal."

Sir William V. Wood, proposing the toast of the Society, quoted John Bright's words, "Railways have rendered more service and received less gratitude than any institution in the country," and said that the curse of their bearing the title of "public institution" was that railways received so much irresponsible and ludicrous criticism from outside sources. Their efforts to get freedom as regards rates had had a good public reception, but they wanted definite support, particularly from the Government ; success had also been attained in their contacts with road hauliers with whom they had no quarrel ; such antagonism as existed was related to the present laws. He entirely agreed with Sir Arthur Salter's remarks, especially with regard to the regrettable lack of co-operation from the Government in 1932.

Mr. E. E. Painter seconded this toast, wishing continued success and long life to the Society, and Mr. A. W. Arthurton replied in suitable terms.

Mr. H. J. Burcham proposed the toast of the Chairman, who briefly replied.

B.S.S. FOR PAINT MATERIALS.—With the issue of three revised specifications the work of revision of the series of British Standards for paint materials is now completed. The following are the specifications : B.S. 282 Lead Chromes, B.S. 388, Aluminium Powder and Paste, B.S. 390, Oils Pastes. Copies may be obtained from the British Standards Institution, 28, Victoria Street, London, S.W.1, price 2s. 2d. each post free.

THE AMERICAN TOUR OF THE CORONATION SCOT TRAIN.—The exhibition tour of the L.M.S.R. Coronation Scot train is given in the *Railway Age* as follows :—

City	Date
Baltimore, Md.	March 21
Washington, D.C.	,, 22
Wilmington, Del.	,, 23
Philadelphia, Pa.	,, 23
Lancaster, Pa.	,, 24
Harrisburg, Pa.	,, 25
Pittsburgh, Pa.	,, 25
Wheeling, W. Va.	,, 26
Columbus, Ohio	,, 27
Dayton, Ohio	,, 27
Cincinnati, Ohio	,, 28
Louisville, Ky.	,, 29
Indianapolis, Ind.	,, 30
Terre Haute, Ind.	,, 30
St. Louis, Mo.	,, 31
Springfield, Ill.	April 1
Chicago, Ill.	,, 2
Kalamazoo, Mich.	,, 3
Battle Creek, Mich.	,, 3
Detroit, Mich.	,, 4
Toledo, Ohio	,, 5
Cleveland, Ohio	,, 6
Akron, Ohio	,, 6
Youngstown, Ohio	,, 7
Erie, Pa.	,, 7
Buffalo, N.Y.	,, 8
Rochester, N.Y.	,, 9
Syracuse, N.Y.	,, 9
Utica, N.Y.	,, 10
Schenectady, N.Y.	,, 10
Albany, N.Y.	,, 11
Springfield, Mass.	,, 11
Worcester, Mass.	,, 12
Boston, Mass.	,, 13
Providence, R.I.	,, 13
Hartford, Conn.	,, 14
New Haven, Conn.	,, 14
New York City (Sunnyside Yard)	,, 14

The Coronation Scot will be routed over a total of eight railroads on its 3,121-mile tour. They comprise : Baltimore & Ohio, 375 miles ; Pennsylvania, 839 miles ; Big Four, 125 miles ; Louisville & Nashville, 114 miles ; Alton, 284 miles ; Michigan Central, 284 miles ; New York Central (including Boston & Albany), 849 miles ; and New York, New Haven & Hartford, 251 miles. The train will then be on exhibition at the New York World's Fair.

Railway Share Market

Aided by the lower unemployment figures and encouraging trade reports, activity in most sections of the Stock Exchange broadened this week and the upward movement in values has continued. Home railway securities were in larger demand partly owing to the better traffic figures shown by the latest return. The market is taking the view that rearmament and allied work will accelerate activity in many trades and that over the next few months there are reasonable prospects of the receipts of the main-line railways showing a more encouraging trend.

Southern deferred has risen to 15⅜, while the preferred has moved up to 69, assisted by the good impression created by the railway's return for the past week which shows a gain of £9,000 and records improvement in all classes of traffic. The Southern 5 per cent. preference stock changed hands around 95, while the 4 per cent. debentures were 98. L.M.S.R. stocks were again favoured, and the 4 per cent. preference has been active around 55½, as has the 1923 preference around 35, while the 4 per cent. guaranteed stock improved to 84½. The ordinary stock transferred up to 14, and the 4 per cent. debentures were 93½. L.N.E.R. first guaranteed moved up to 72 and the second guaranteed to 61, while the first preference was higher at 30 and the second preference improved to 12½. The 3 per cent. debentures were quoted at 67 and the 4 per cent. debentures at 87. It is being pointed out in the market that in most cases the debentures of the main-line railways would still appear to offer quite attractive yields, bearing in mind the first class investment merits of these stocks. Great Western ordinary appreciated to 29½, while the 5 per cent. preference was 84 and the 5 per cent. guaranteed was 104½. The yield of close on 6 per cent. offered by the 5 per cent. preference stock would seem unduly generous. London Transport "C" participated in the general advance and has improved to 76½, while the 4½ per cent. "A" stock was higher at 112½, as was the 5 per cent. "B" stock at 114.

Foreign railway securities were again relatively dull in the absence of improvement in demand. B.A. Gt. Southern ordinary was lower at 9½, while the 5 per cent. preference was 31 and the 6 per cent. preference 21. B.A. Western ordinary transferred around 7 and the 4½ per cent. preference around 20, while the 4 per cent. debentures were 46. Central Argentine ordinary was 8½ and the 4½ per cent. preference 26, while the 6 per cent. preference was 28. Antofagasta preference stock had a steadier appearance at 22 and Nitrate Railways ordinary shares were rather more active with dealings ranging from 36s. to 38s. 6d., San Paulo ordinary was better at 25, but the improvement was regarded mainly as a movement in sympathy with the tendency in Brazilian Government bonds. International Railways of Central America preferred stock made the better price of $52½. Union Pacific, and various other American railway shares were higher on balance, despite moderate fluctuations, while Canadian Pacific preference stock improved to 25 and the common shares were more active.

Traffic Table of Overseas and Foreign Railways Publishing Weekly Returns

	Railways	Miles open 1938–39	Week Ending	Traffics for Week: Total this year	Traffics for Week: Inc. or Dec. compared with 1938	No. of Weeks	Aggregate Traffics to Date: Totals: This Year	Aggregate Traffics to Date: Totals: Last Year	Aggregate Traffics to Date: Increase or Decrease	Shares or Stock	Prices: Highest 1938	Prices: Lowest 1938	Prices: Mar. 8, 1939	Yield % (See Note)
				£	£		£	£	£					
South & Central America	Antofagasta (Chili) & Bolivia	834	5.3.39	15,310	+ 4,500	9	115,420	155,460	— 40,040	Ord. Stk.	14	7¼	7	Nil
	Argentine North Eastern	753	4.3.39	7,959	— 211	36	345,421	332,917	+ 12,504	,,	61½	2	3½	Nil
	Argentine Transandine	—	—	—	—	—	—	—	—	A. Deb.	82	75	72½	5½
	Bolivar	174	Feb., 1939	3,700	+ 200	8	7,100	7,100	—	6 p.c. Deb.	8	7	7	Nil
	Brazil	—	—	—	—	—	—	—	—	Bonds.	10	4	5	9 1/16
	Buenos Ayres & Pacific	2,806	4.3.39	113,648	+ 2,172	36	2,962,598	3,071,033	— 108,435	Ord. Stk.	61½	31¼	4	Nil
	Buenos Ayres Central	190	18.2.39	$76,000	— $27,500	34	$3,613,200	$4,148,600	— $535,400	Mt. Deb.	151½	8	10½	Nil
	Buenos Ayres Gt. Southern	5,082	4.3.39	194,975	— 5,521	36	5,022,828	5,304,961	— 282,133	Ord. Stk.	17 5/16	8½	10	Nil
	Buenos Ayres Western	1,930	4.3.39	51,303	+ 8,313	36	1,557,009	1,633,747	— 76,738	,,	12¾	5	8	Nil
	Central Argentine	3,700	4.3.39	142,059	+ 36,225	36	4,120,437	4,477,719	— 357,282	,,	13¼	5¾	9	Nil
	Do.	—	—	—	—	—	—	—	—	Dfd.	6	2½	3½	Nil
	Cent. Uruguay of M. Video	972	25.2.39	17,890	— 5,039	35	634,454	620,754	+ 13,700	Ord. Stk.	3	1¼	1½	Nil
	Cordoba Central	1,218	—	—	—	—	—	—	—	Ord. Inc.	3¾	⅝	2½	Nil
	Costa Rica	188	Jan., 1939	16,626	— 6,724	31	155,492	178,556	— 23,064	Stk.	28	22½	22	9 1/16
	Dorada	70	Jan., 1939	13,300	— 4,400	4	13,300	17,700	— 4,400	1 Mt. Db.	105¼	104	103½	5 3/16
	Entre Rios	810	4.3.39	13,927	— 142	36	558,930	521,000	+ 37,930	Ord. Stk.	7¼	3½	4½	Nil
	Great Western of Brazil	1,092	4.3.39	11,500	+ 4,400	9	104,900	84,100	+ 20,800	Ord. Sh.	3/	1/-	¼	Nil
	International of Cl. Amer.	794	Jan., 1939	$548,273	+ $61,132	4	$548,273	$487,141	+ $61,132	—	—	—	—	—
	Interoceanic of Mexico	—	—	—	—	—	—	—	—	1st Pref.	6d.	6d.	½	Nil
	La Guaira & Caracas	22¼	Feb., 1939	4,655	— 315	8	9,405	9,580	— 175	Stk.	8	6½	7½	Nil
	Leopoldina	1,918	4.3.39	19,279	+ 103	9	188,709	177,340	+ 11,369	Ord.Stk.	4	1	1½	Nil
	Mexican	483	28.2.39	$299,200	+ $90,400	8	$2,550,300	$2,686,200	— $135,900	,,	¼	1/16	⅛	Nil
	Midland of Uruguay	319	Jan., 1939	9,886	— 2,743	31	64,165	65,353	— 1,188	,,	7/8	½	½	Nil
	Nitrate	386	28.2.39	5,084	— 1,495	8	19,202	31,326	— 12,124	Ord. Sh.	52/9	19/16	15⅜	6⅛
	Paraguay Central	274	4.3.39	$2,745,000	— $126,000	36	$108,232,000	$112,120,000	— $3,888,000	Pr. Li. Stk.	60	55½	47½	12 5/8
	Peruvian Corporation	1,059	Feb., 1939	61,801	— 10,736	35	539,567	660,322	— 120,755	Pref.	5⅝	1¾	2	Nil
	Salvador	100	25.2.39	£46,000	+ £12,750	35	£714,464	£678,625	+ £35,839	Pr. Li. Db.	23	20	19½	Nil
	San Paulo	153½	26.2.39	22,678	— 13,416	8	221,816	262,200	— 40,384	Ord. Stk.	64	28	24½	16 5/16
	Taltal	160	Jan., 1939	3,870	— 2,425	31	20,785	28,830	— 8,045	Ord. Sh.	1 5/16	½	½	10
	United of Havana	1,353	4.3.39	48,456	— 9,851	36	719,793	794,028	— 74,235	Ord. Stk.	3⅜	½	1	Nil
	Uruguay Northern	73	Jan., 1939	983	— 106	31	7,438	6,437	+ 1,001	Deb. Stk.	2	1	2	Nil
Canada	Canadian National	23,721	28.2.39	709,465	— 14,975	8	5,312,956	5,322,270	— 9,314	—	—	—	—	—
	Canadian Northern	—	—	—	—	—	—	—	— 4 p.c.	Perp. Dbs.	72	60	70½	5 11/16
	Grand Trunk	—	—	—	—	—	—	—	—	4 p.c. Gar.	104	90	98½	4 1/16
	Canadian Pacific	17,186	28.2.39	494,600	— 12,400	8	3,779,000	3,939,600	— 160,600	Ord. Stk.	87/16	41¼	51½	Nil
India†	Assam Bengal	1,329	10.2.39	44,647	+ 681	47	1,305,237	1,200,589	+ 104,648	Ord. Stk.	81½	70	75½	4
	Barsi Light	202	20.2.39	2,692	— 975	48	124,485	124,402	+ 83	Ord. Sh.	60½	54¼	55½	7 5/16
	Bengal & North Western	2,108	20.2.39	90,355	+ 11,236	20	1,147,247	1,101,353	+ 45,894	Ord. Stk.	311	278	264	6 15/16
	Bengal Dooars & Extension	161	20.2.39	3,870	+ 394	48	135,184	131,871	+ 3,313	,,	89	83	87⅜	7 7/16
	Bengal-Nagpur	3,268	10.2.39	216,300	+ 5,189	47	6,030,341	6,062,512	— 32,171	,,	95½	90	93½	4¼
	Bombay, Baroda & Cl. India	3,085	28.2.39	219,225	+ 12,375	49	8,045,850	8,112,300	— 66,450	,,	112 7/16	95	107½	5 9/16
	Madras & Southern Mahratta	2,967	10.2.39	169,350	+ 12,027	47	4,822,224	4,559,802	+ 262,422	,,	109	97	101½	7⅝
	Rohilkund & Kumaon	571	20.2.39	16,646	— 1,135	20	212,901	211,941	+ 960	,,	308	285	275	6 9/16
	South Indian	2,531½	10.2.39	111,474	— 7,730	47	3,542,834	3,620,707	— 77,873	,,	104	101	101½	4 5/16
Various	Beira-Umtali	204	Dec., 1938	85,945	— 4,434	13	250,250	276,730	— 26,480	—	—	—	—	—
	Egyptian Delta	620	20.2.39	5,575	+ 21	48	203,097	215,165	— 12,068	Prf. Sh.	⅞	5/6	½	Nil
	Kenya & Uganda	1,625	Jan., 1939	249,402	— 34,642	4	249,402	284,044	— 34,642	—	—	—	—	—
	Manila	—	—	—	—	—	—	—	—	B. Deb.	49	41	43½	9 3/16
	Midland of W. Australia	277	Jan., 1939	14,947	+ 1,305	31	107,233	97,977	+ 9,256	Inc. Deb.	93¾	89	93	4¼
	Nigerian	1,900	21.1.39	61,400	— 2,595	43	1,686,551	2,326,732	— 640,181	—	—	—	—	—
	Rhodesia	2,442	Dec., 1938	392,771	— 28,871	13	1,172,139	1,317,239	— 145,100	—	—	—	—	—
	South Africa	13,285	18.2.39	609,594	— 7,448	46	28,810,214	29,861,930	— 1,051,716	—	—	—	—	—
	Victoria	4,774	Dec., 1938	859,188	— 55,580	26	4,733,741	4,747,229	— 13,488	—	—	—	—	—

NOTE.—Yields are based on the approximate current prices and are within a fraction of 1/16

† Receipts are calculated @ 1s. 6d. to the rupee § ex dividend

The variation in Sterling value of the Argentine paper peso has lately been so great that the method of converting the Sterling weekly receipts at the par rate of exchange has proved misleading, the amount being over estimated. The statements are based on the current rates of exchange and not on the par value